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ABSTRACT

The seven papers in this collection describe projects in English for academic purposes. Analysis of the communication needs of learners is discussed in "English for Academic Purposes: Practice Material for the Listening Comprehension and Writing Needs of Overseas Students," by R.R. Jordon and Alan Matthews. The pedagogic advantages of authentic resource materials are discussed by Martin Phillips and Clarence Shettlesworth in "How to ARM Your Students: A Consideration of Two Approaches to Providing Materials for ESP." "Developing a Flexible ESP Programme Design" by R.G.D. Chamberlain and M.K.S. Flanagan discusses the learner's need for English for sociocultural purposes. Specific programs are described by Tom Jones in "The Foundation Course in Laboratory Procedures at King Faisal University CSE Project," and Philip King in "The CSE Programme for Medical Students at KAAU and the Science or Language Dilemma." Selection of material and equipment is discussed by G.M. Greenall in "Designing Science Writing Materials" and by Joseph Cleary in "The Use of Video-Tape Recordings on the Communication Skills in English Project, KAAU." (JB)

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Introduction

The seven papers in this collection have certain similarities: they all describe particular projects in English for academic purposes (now often referred to as EEP: English for educational purposes); they all refer to ESP materials actually produced or selected and they all stress the importance of getting the administrative as well as the professional side of things right. Some of the most crucial current questions come under scrutiny and a comparison of the various answers suggested should be revealing for those involved in ESP both at the theoretical and practical levels.

The question of an analysis of the communication needs of learners is discussed in some detail in Paper 1 (EAP: Practice Materials for Listening Comprehension and Writing Needs for Overseas Students by Bob Jordan and Alan Matthews of the Department of Education, Manchester University). There is significant agreement in all the papers on the importance of designing courses to train specific and relevant study as well as purely communication skills.

None of the papers advocates a structuralist approach to syllabus specification although there is a pleasing lack of dogmatism on this point. The Chamberlain/Flanagan paper on ESP programme deisgn at King Faisal University (KFU), Dammam, actually includes the word "flexible" in its title and mentions in connection with its language laboratory component a course "based on a communicative syllabus overtly grammar/situation in outline, covertly incorporating the essence of a restricted notional-functional language exchange system". Certainly, all the contributors favour syllabus specification nearer the analytic than the synthetic poles on the David Wilkin's continuum.

Not surprisingly, perhaps, the use of authentic material and discourse analysis techniques are constant themes. In Paper 2 Martin Phillips and Clarence Shettlesworth stress the pedagogic and pragmatic advantages of authentic resource materials; for them such materials and their behavioural implications are the starting point for course design. Less strong claims on the use of authentic materials are made in Tom Jones' Paper 4 – the Foundation Course in Laboratory Procedures (KFU), in Paper 6 where G M Greenall describes the development of science writing materials at KAAU and also in the keynote papers on both projects mentioned above.

ESP practitioners may well find the comments on local operational constraints in the papers on the two overseas projects particularly revealing. The importance of establishing close, clearly-defined relationships with administrators and specialist staff, for example, is given considerable emphasis. Comments on the use of team-teaching (scientist plus English language teacher) at KFU should be of interest as they illustrate the way in which the two superficially similar Saudi Arabian projects sometimes adopt different approaches.

The use of media in EAP programmes is covered in greater or lesser detail in most of the papers. In Paper 7 Joseph Cleary concentrates solely on the use of VTR on the KAAU project.

The general tone of this collection reveals that the contributors do not favour the "exclusive" approach to ESP. Papers 1 and 3 discuss the need and desire of EAP learners of English for socio/cultural purposes.

ENGLISH FOR ACADEMIC PURPOSES: PRACTICE MATERIAL FOR THE LISTENING COMPREHENSION AND WRITING NEEDS OF OVERSEAS STUDENTS

R R Jordan and Alan Matthews, Department of Education, University of Manchester

1 Pre-Session Intensive English Course

For several years the Tutors in English to Overseas Students have organised a Pre-Session Intensive English Course in the Department of Education at the University of Manchester. The seven-week course, which takes place in August and September, is for overseas graduates who have been accepted for post-graduate studies by various departments at Manchester University. The students, who speak English as a foreign language, apply to attend the course because their ability in English is insufficient to pursue studies through the medium of English.

In 1976, 49 students attended the course: 23 from the Middle East (mostly from Iraq and Iran), 10 from Asia (mostly from Indonesia and Malaysia), 9 from Europe (mostly from Greece and Turkey) and 7 from Latin America. They were following a variety of courses but could be grouped under four general headings: (i) maths, sciences, engineering; (ii) economics; (iii) adult education; (iv) architecture, town and country planning.

The students spent most of the course in groups of 12 divided according to general English language proficiency, with different tutors morning and afternoon. For part of the course, the students were divided according to their particular subject areas with material generally appropriate for their subjects.

2 The Language Needs of the Students

Clearly the students need to develop their language proficiency sufficiently to enable them to undertake studies at university level and to be able to function adequately in the language. This entails an evaluation by the Tutors of the language skills and study skills necessary and assigning priorities to them. To take one example: in the Department of Economics students following the one-year Economic Development Diploma course attend an average of 8 hours of lectures a week, 3 hours of seminars and tutorials and are required to write 3 essays a term (average length 2-3,00 words). At the end of course they take a written examination.[1]

[1] A detailed discussion of this course and the EAP framework devised for it is contained in 'SELMOUS Occasional Papers No. 1', April, 1977.

This would suggest that the students need to practise listening to lectures, taking notes, writing continuously and taking part in discussions.

Further evidence for selecting the lecture situation as a useful area for practice is provided by several pieces of research that have been conducted for post-graduate degrees at the SELMOUS group of universities, especially that by Wijasuriya (Manchester, 1971), Holes (Birmingham, 1972) and Morrison (Newcastle upon Tyne, 1974). In particular, informal lectures containing colloquial language are cited as situations of great difficulty for understanding.[1]

Surveys of overseas postgraduates' use of English for speaking, reading and writing were conducted at the Universities of Manchester and Newcastle between 1972 and 1974. The main points to emerge from the surveys were that by far the largest proportion of a students time is spent in a listening situation. In addition, and far more important, 70% of those in the survey listed understanding of spoken English as their biggest difficulty on arrival in Britain (they referred, in particular, to problems of understanding accents and fluently-spoken language). Although only 11% of the students listed writing as their biggest language problem on arrival, this percentage increased to 22% six months later. In other words, writing becomes increasingly important as students have to submit essays, reports and thesis outlines.[2]

The research, surveys and our own teaching experience have helped us to focus on the needs of the students. We decided that in a seven-week course it was desirable to concentrate on a limited number of objectives in the belief that if the students felt they had made some demonstrable progress it would help to develop their self-confidence in their use of English. We decided, therefore, to focus on listening comprension, note-taking and academic writing. The listening comprehension component occupies 25% of the course time, while the writing component occupies 12%. This was not to say that we excluded other language skills, simply that they were not emphasised to the same extent. For example, we include a 'survival English' component which largely consists of practising the spoken language in social situations. We also build into the course opportunities for seminar discussions and giving short talks. Undesirable though it may be, it is possible for a student to pursue his course of studies uttering hardly a word; it is not possible to ignore the use of listening and writing.

[1] Full references are provided in "English for Academic Purposes" ed. A P Cowie and J B Heaton, BAAL/SELMOUS. (Paper 1: Identification of Problems and Needs: a Student Profile.)

[2] "A Survey of the Spoken English Problems of Overseas Postgraduate Students at the Universities of Manchester and Newcastle upon Tyne" by R R Jordan and R Mackay, in the Journal of the Institutes of Education of the Universities of Newcastle upon Tyne and Durham: vol. 25 No. 125 November, 1973.

The remainder of this article will consider the listening comprehension and note-taking material together with the academic writing component.

3 Listening Comprehension and Note-Taking

(a) The Units: General

Ten Listening Comprehension and Note-Taking Units have been prepared according to a format originally designed by Kenneth James, one of the Tutors in English to Overseas Students in the Department of Education. The Units follow essentially the same design: each comprises three separate but interlocking Stages on which various language exercises are based. Although the main purpose of the Units is to cater for aural skills and note-taking practice, not all the exercises concentrate on this.

The subject-matter of the Units is concerned with aspects of Study Skills and the problems students are likely to encounter when studying through the medium of English. Titles include "Some of the Problems of Overseas Post-graduate Students", "Listening and Understanding", Problems of Writing in a Foreign Language", "Seminars and Tutorials" and "Some Psychological Considerations in the Learning of a Foreign Language". The advantages of selecting Study Skills as the main theme include:

i it conveys useful information about language learning;

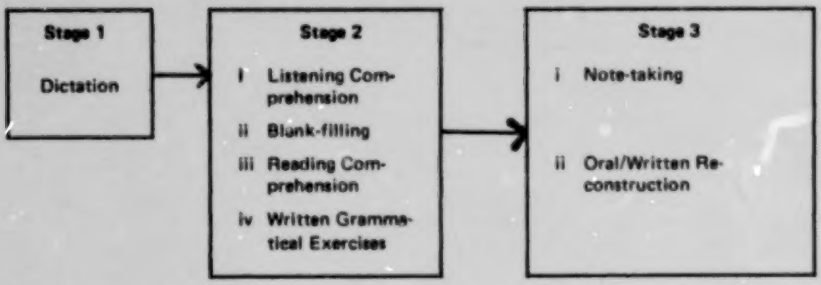
ii it is relevant to all the students, irrespective of their individual specialisms and

iii it is suitably academic.

All the Units have been recorded for use with a tape-recorder in class. Different tutors, both male and female, were asked to do the recordings so that the students would be exposed to a range of voices and accents.

The three Stages of each Unit deal with the same subject-matter. Stage 1 consists of a few sentences containing the key ideas which are to be developed at greater length in subsequent Stages; Stage 2 is an expansion of Stage 1, Stage 3, a further expansion of Stage 2, is a fully-fledged lecturette. Stage 1 is a lead-in to the Unit and also functions as a preparation for the more demanding exercises at Stage 2 level and in turn Stage 2 prepares the ground for the most difficult task, that of note-taking, in Stage 3.

The overall design of each Unit is shown in the following diagram, which includes a mention of the exercises associated with each of the three Stages. The exercises are described and discussed in more detail below.



2 The Units: Detail

A complete Unit consists of the following:—

Stage 1: (between 50 and 90 words)

This Stage aims at giving practice at intensive listening and dictation. The students follow the text silently as they listen to the recording on tape. The tutor draws attention especially to the important phonological points in the text (eg weak forms, contractions, elisions, pronunciations of plural "s" etc.) and also to a lesser extent to the syntactic and lexical difficulties. The text is then put to one side and the students are required to write the passage from dictation; this is then checked against the original.

We feel it is important that features of continuous speech known to cause problems in understanding are made explicit to the students. The dictation gives immediate practice and is a measure of how well the students are able to distinguish these features.
This is an example of a Stage 1 (taken from UNIT 9):

Seminars and Tutorials

Originally the differences between a seminar and a tutorial were one of size of group, and more importantly, one of function. Nowadays these terms are often interchanged.

They have two main aims: to discuss students' difficulties and for lecturers and students to have more personal contact.

Students from overseas should try to gain confidence by practising as much as possible on this course. They should not worry too much about grammatical accuracy.

Stage 2: (between 280 and 500 words)

Various exercises are based on this Stage in the following order:

(a) **Listening Comprehension:** The students listen to the recorded passage without seeing the tapescript. They are then given the listening comprehension exercise which consists of five true/false questions to test their overall understanding. For the first few Units (depending on the level of the group) it may be necessary to play the passage twice; alternatively the exercises may be given out before the passage is played. The exercise is then checked and briefly discussed, ie the students try to justify their answers orally.

(b) **Blank-filling:** The aim here is to given practice mainly in listening for and distinguishing contractions and weak forms. The tapescript with selected words and phrases omitted is given to the students who write in the missing words as they listen to the text.

Contractions are usually given some attention in textbooks. The students almost always know of the existence of contractions even if they sometimes fail to recognise them in speech or if they hardly ever use them. Weak forms, on the other hand, are still largely neglected in language teaching yet an understanding of their usage is relatively easy to teach and pays quick and effective dividends in improving both the students' ability to understand native speakers and also their ability to produce the language. It is extremely important for the student to realise that it is not only the unfamiliar lexical items which cause problems in understanding but also the simplest of words, immediately recognisable in print but often misinterpreted or even unheard in speech.

(c) **Reading Comprehension:** This exercise consists of five true/false comprehension questions. The students have to search for the relevant information by reading the tapescript; they also have to justify their answers by giving evidence in writing, eg a quotation from the tapescript.

(d) **Written Grammatical Exercises:** Certain key grammatical structures and functions of language are built into the text of Stage 2 and serve as the basis for written exercises. These structures, such as Informal and Formal Relative Clauses, Modals expressing possibility and probability, conditionals etc., and language functions, for instance Giving Advice, Giving Reasons and Comparing etc., are chosen on the basis of relatively high frequency of occurrence and general usefulness. They are a small selection and provide only a limited set of remedial exercises. They do not include remedial practice for grammatical items which, although occurring very frequently, are of little communicative value, eg, article usage.

The exercises take a variety of forms. They include (a) the study of a given structure, finding that same structure in the tapescript of Stage 2 and copying

it out, leading to the production of one's own sentences on the same pattern, guided by a written cue; (b) transformation exercises; (c) scrambled half-sentences requiring matching and (d) modified Cloze tests, used mainly to refocus attention on grammatical items practised in previous Units.

Stage 3: (between 800 and 1,200 words)

The third Stage is an expansion of the points contained in Stage 2 and its main aim is to train the students in note-taking.

The students are given a sheet of Guided Notes which indicates the overall framework of the lecturette and provides a number of written prompts followed (or preceded, as they case may be) by dotted lines where the students should write their own notes. For example:–

Title: .....

O.s. stud. finds tuts./sems. .....

To obtain full value stud. must be .....

1 Breakdowns .....

Explanatns:–

a. not sufficient command .....

b. ..... pronunciatn.

c. tutor's uncertainty: .....

what happens –

o.s. stud. fails to .....

may use .....

Result: tutor .....

Before the first Unit is attempted, the tutors will have given the students information and advice on note-taking techniques, including a list of common abbreviations and symbols. When the guided notes sheets are handed out to the students the tutor draws attention to any abbreviation or symbol appearing for the first time as well as to any special structural feature of the lecturette.

The students then listen to the recording of the Stage and take their own notes. It is usually necessary (at least for the first few Units) to stop the tape at the end of sections or paragraphs to allow the students time to write. It is important, though, that they are encouraged to write only the minimum to give sufficient meaning, concentrating mainly on the main ideas and on the major information-carrying words. It is necessary with all our groups in the early part of the course (and with the lower-level groups for a longer period) to play the tape a second time.

Clearly in reality a student does not have the opportunity to listen a second time to a lecture or seminar contribution, unless he takes the trouble to record it. By giving the students the chance of listening twice (or even three times) we are moving away from the realistic lecture situation. Initially, however, we are aiming to provide the students with practice in acquiring a technique which may not have been acquired in the first language for the under-graduate degree, and we feel it is justifiable to lessen the students' task for the purposes of technique learning. Nevertheless, as the course progresses the guided notes become increasingly less full – and with an advanced group may be completely dispensed with – and the tutor can ensure that the students hear the tape only once. Furthermore in the second half of the course the students listen to talks given by the tutors and also to a number of half-hour lectures by guest lecturers from other departments in order to allow practice at note-taking in authentic situations.

After the students have finished taking their own notes suggested notes are handed out. To take an example these are the suggestions of how to complete the guided notes given above:–

Title: The imp. of Qns

O.s. stud. finds tuts./sems. valuable

To obtain full value stud. must be proficient in askg. qns.

1 Breakdown in communicatn.

Explanatns:–

a. not sufficient command over gram. + vocab.

b. poor pronunciatn.

c. tutor's uncertainty: stud. asked qn?

What happens –

o.s. stud. fails to employ correct qn. form.

may use statemt.

Result: tutor interprets as comment.

It is made clear that these are *suggestions* only and by no means the only version. The students compare their own notes with the suggested ones, note any differences and omissions and check with the tutor for possible variations.

The full text of the lecturette is given out; it is either read silently or followed while the tape plays. Any difficulties are explained.

The notes taken by the students may also be used as prompts for either a written or an oral reconstruction of the lecturette.

3 Note-Taking Difficulties Observed

The problems involved in note-taking should not be underestimated. It is a highly complex activity involving simultaneously multiple language skills – listening, writing and to a lesser extent reading. The student has to remember what was said, write it down in note form, simultaneously listen to the ongoing lecture, select and organize what he is presently to write – if anything – and in addition monitor, and perhaps modify, what he has already written by skim-reading.

Often the overseas student finds himself in an audience predominantly British where the lecturer makes no concessions to the foreign minority. The student is constantly pressurized by the "once-only" nature of speech: he has only one chance to understand, he cannot stop the lecturer or influence his pace of delivery. If he misses a point, it is rarely repeated. The lecturer may have a marked regional accent, may speak rapidly and may use a sprinkling of colloquialisms which cause the students added difficulty.

There is the further problem of selecting what is important for noting down and eliminating points of secondary value and tangential remarks. The tendency is to assume that everything the lecturer says is of equal importance and hence to attempt the hopeless task of writing everything down. Furthermore, when writing, overseas students have difficulty restricting themselves largely to information-carrying words: when grammatical accuracy has been for so long the principal aim at school (and is also required in reasonable measure in other Pre-Session Course components) it seems that it does not come naturally, to the students to forsake much of their knowledge of the grammatical system of English in favour of a shorthand expression.

In addition, for many of the students, especially from the Arabic-speaking countries and from Iran, the problem of taking notes is further compounded by having to operate at speed with a different writing system, in a different linear direction (ie from left to right).

Because of the nature of this formidable task we believe that a considerable amount of support in the way of guided notes should at first be provided and only gradually be reduced. Having said that, we nevertheless feel it is important that all students, at all levels of ability, should by the end of the course have experience at taking notes without any guidance: after all, within a few weeks of the Pre-Session Course finishing this will be the situation they are faced with.

4 Design Problems Encountered

(a) An initial problem was to decide on the theme of Units. We gave serious consideration to three alternatives:

i Study Skills and the problems of overseas students studying through the medium of English

ii subject-specific material and

iii aspects of living in Britain.

The first was chosen for reasons outlined in (1) above.

We decided against subject-specific materials because of the wide range of disciplines our students specialize in and the impossibility of providing for each specialism. In fact the range of subjects will alter from year to year, sometimes quite markedly, and we know the exact composition only when the students arrive. In addition, the Pre-Session Course has an ESP component – with four or five groups as homogeneous as possible – which runs for the second half of the course and which contains some listening material. Also we decided that to attempt to provide for each specialism would be an uneconomical duplication of work for already overtaxed resources to cope with!

We rejected culturally-based materials because many topics, eg Banking, Shopping in Manchester etc. tend mainly to be descriptive and factual rather than analytical or presenting points of view; we felt they were therefore less appropriate for the simulation of academic lectures. We recognise the value of tapping this source of information for teaching purposes but preferred to use it as the basis of a *Reading for Information* component – a future development.

(b) We aimed to produce Units which were flexible enough to cater for a wide range of abilities. The three Stages provided that flexibility. Roughly two half-mornings are timetabled per Unit. Within this time there is no need for a tutor

to cover the whole Unit: he may, for instance, consider it necessary with a low-level group to concentrate only on Stages 1 and 2 only in subsequent Units tackle Stage 3. On the other hand, with an advanced group he may decide to omit Stage 1 altogether and start with Stage 2 or, towards the end of the course, tackle Stage 3 immediately with or without the help of guided notes. He may also adopt a somewhat different teaching approach for each Unit to provide further variety.

The following problems relate specifically to note-taking:–

(c) The Units were first written about four years ago, by a team of tutors. The first attempts showed a certain lack of standardization, particularly noticeable in the guided notes sheets (and to a lesser extent in the written grammatical exercises). Each tutor used his own system of note-taking with the result that, although there was a large degree of common ground, certain abbreviations, symbols and means of presentation differed. For example, *question* was abbreviated as Q, q or qn; *number* as n or no; *student* as stud or st (all with or without a full stop). Sometimes a symbol was used where another tutor would use the appropriate words, ∈ ∩ ⟩ or leads to / becomes. This caused some confusion. Since then one tutor has undertaken a complete revision and standardized the approach to note-taking.

(d) At first some of the written prompts on the guided notes sheets were paraphrases of the tapescript and not the exact words used. Again this caused confusion. For example:–

Text on tap:

Thirdly I shall deal with a problem that worries most overseas students in a lecture.

The problem is this – they cannot follow the argument etc.

Guided Notes:

3 Unable to .....

It was often unclear, because of the paraphrase, that this cue referred to the sentences quoted. We found it necessary to change these paraphrases in favour of the exact words used, even though a native speaker would not adopt such a rigid system, eg

Guided Notes:

3 Cannot .....

(e) The Units – and especially Stage 3 – lacked the spontaneity of normal speech. At all three Stages they were fully scripted, although prepared with the lecture situation in mind. This resulted in an unrealistically polished performance by each of the recording tutors, more typical of a radio talk than the average lecturer's style. There were none of the normal features of unscripted speech, such as hesitations, backtracking, mid-sentence direction changes and occasional ungrammaticality. In addition – and very important for note-taking – the information content was far more concentrated than in a live lecture.

For the 1976 Pre-Session Course we tried a different approach at Stage 3 level with the last few Units. A tutor was asked to read the tapescript of Stage 3 and make his own fairly detailed written notes from it in preparation for a recording he was to make by speaking from his own notes. This successfully introduced many of the missing features of spontaneous lecturing. Predictably the speed of delivery was slower than the read version and the content was less dense. Generally speaking the students found this version easier to understand and easier to take notes from. The tutors all agreed it was an improvement on the spoken prose.

4 Academic Writing

(a) Writing Needs

It was noted earlier that students need to write essays, both in term-time and as answers to questions in examinations. In addition, depending on their course of study, they may need to write reports, dissertations or theses: all examples of extended or continuous writing. In other words, they will have specific writing tasks within their own subject areas.

It is necessary to examine the writing requirements for the above tasks in order to see exactly what the goals might be in a writing course.

It may seem to be stating the obvious, but the first requirement is that the student must organise his thoughts and know what he wants to communicate, his ideas, views etc., perhaps summarised by using the term *notions*. He must then select the appropriate language *register* for his subject which, in general, may be referred to as *academic* and later as *specific* (ESP). At the same time he must use the appropriate *style*, which will normally be formal.

The *organisation* of the writing becomes important, particularly for the overall effect it has upon the reader: this includes such considerations as introducing, developing and discussing, and concluding. The mechanics of the organisation are also necessary: these include punctuation and paragraphing (on the assumption that an uninterrupted flow of writing is visually overwhelming and almost indigestible).

The next requirement is *accuracy*. Up to a certain (undefined) point errors are tolerated or accepted; beyond a certain point, incomprehension, ambiguities or misunderstandings arise. It would be interesting to see to what extent errors that are considered minor (eg omission of the final 's' in 3rd person singular present simple verb tenses) irritate or prejudice a supervisor, tutor or examiner. In the same category of requirement is, perhaps, *legibility;* apart from causing difficulty in reading, writing that is unclear may prejudice the reader.

Finally, *fluency* of writing (involving *speed*) is a desirable asset; clearly it is an advantage in taking notes in lectures and writing answers in examinations. A slow writer is necessarily inefficient with regard to his limited time; ideas cannot be developed fully in a given time.

Are all the above aims realizable in a short writing course? The short answer must be – no! The short-term aim must be communicative adequacy: initially, minimum adequacy, but with the aim that this should be developed into an approach to acceptability. We feel that in an institution of higher education the minimum should not be the aim but the basis upon which to build.

(b) Notional Approach

We decided that perhaps the shortest route to minimum communicative adequacy was by way of notions, enabling a student to express his ideas within a framework of language appropriate to his academic subject. We looked at some study areas (notably economics and overseas administrative studies) and noted that frequent use was made of specific notions such as describing, defining, examplifying, classifying, interpreting data, comparing and contrasting. A similar notional approach has been clearly demonstrated by Keith Johnson.[1]

As the students on our Pre-Session Intensive English Course are from a variety of disciplines, it seemed economical of time and materials for all to follow the same writing course, built up in a series of units, and described as general academic. Running parallel with the academic writing units is ESP material for use in the specialised groups. The aim is to practise in an ESP group writing the notion that has already been practised in general academic writing in a heterogeneous group.

(c) Types of Writing Practice

Inevitably, there were teething problems with the types of exercise that we devised. Initially, a model passage was analysed by the students and parallel passages constructed, from given outlines. This, however, became too rigid and the parallel passages were extremely difficult to compose and appeared unnatural in places.

[1] "Communicate in Writing" Book 1 (draft edition) by Keith Johnson, Centre for Applied Language Studies, University of Reading.

Blank-filling exercises were tried: the aim was to focus attention on the particular language features (eg present simple tense) or forms (eg stem + s) that constituted the notion under consideration. This approach has its value, particularly in the initial stages, but alone is insufficient as little writing is involved and it is certainly not continuous.

An inherent danger in illustrating approaches to writing is the tendency to select model passages that are too long so that the student devotes too much time to reading and understanding rather than to practising the writing. We feel that the illustrative passage is a necessary starting point as it allows the whole context to be seen and the language use analysed. If the sentence is used as the basis, the important facets of context, involving sequence and cohesion, are removed.

The type of writing practice that we favour and which seems to be effective with students is that involving information transfer. A passage is read (it could be listened to) and language features and forms noted; attention is focussed on them by longer blank-filling or sentence completion items normally connected in sequence. A diagram, table or chart of the information may then be drawn up; in other words, it becomes a summary of the passage. The diagrammatic information is then used as a basis for reconstructing the language forms necessary to express the notion being considered.

(d) Writing Units

One Writing Unit will serve as an example of the approach we have adopted. It is concerned with *classification* and is, at present, the third in a series; previous Units are concerned with description, definitions and exemplification; subsequent Units deal with comparisons and contrast, and interpretation of data. The Classification Unit also incorporates some elements of revision from the previous Units; it progresses through three levels, A, B, C.

Exercise A

Read the following carefully:

State Schools in Britain

State schools can be classified according to the age range of the pupils and the level of education provided. Basically, there are two types of school: primary and secondary. Primary schools cater for children aged 5–11 and secondary schools for ages 11–16 (and up to 19). Primary schools can be subdivided into infant schools (for ages 5–7) and junior schools (for ages 7–11). Secondary schools may be of one type for all abilities viz. comprehensive schools; or the pupils may be grouped according to their ability and selected by means of an

examination at the age of 11 (known as the "11 plus exam."). Thus grammar schools cater for the academically-minded; secondary modern schools for the less academically-minded; and technical schools for the more practically inclined.

1 Complete the following sentences: (1 space = 1 or more words)

a Schools can be classified according to the pupil's ages and the type of education.

b There are two types of school: primary and secondary.

c Primary schools can be sub-divided into infant and junior schools.

d Secondary school pupils may be grouped according to their ability.

e The *criterion* for classifying secondary schools is whether or not there is an 11 plus exam.

2 Look at ***Table 1.*** It shows a classification of schools in a hierarchical arrangement (ie a diagrammatic classification). Read the text above again and then complete Table 1 (writing in the spaces provided).

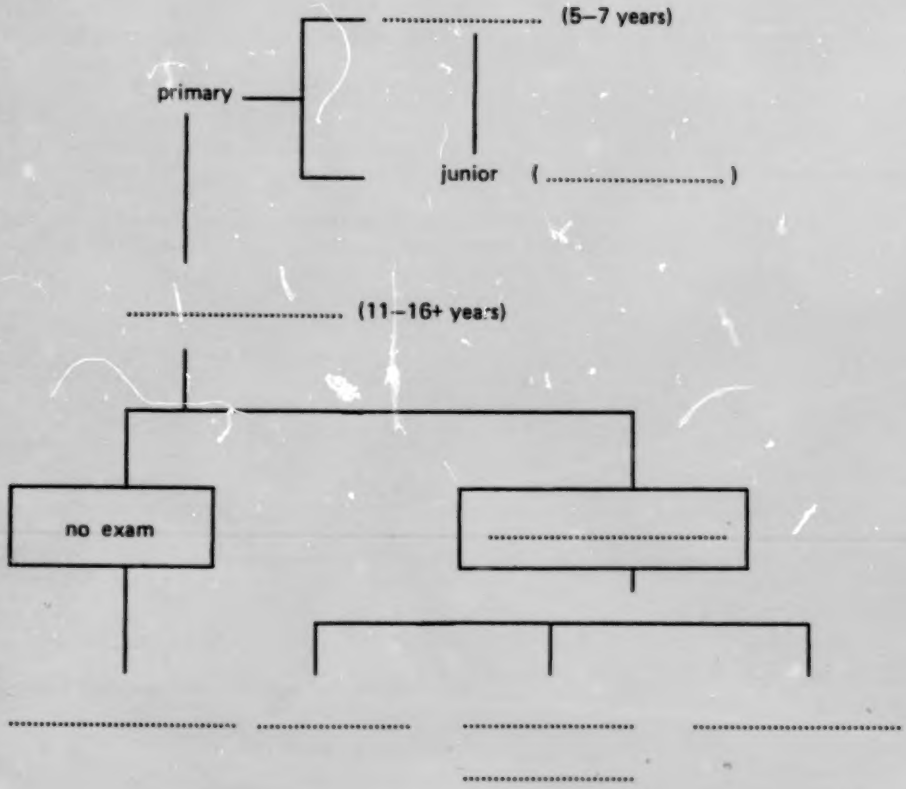
3 Now write a brief description of the information contained in Table 1. Begin your description:

There are two types of school: primary and secondary. Primary schools can be sub-divided, according to age, into .

Exercise B

A longer text on a different subject is provided. Again, blank-filling is used to focus attention on the language forms associated with classifications: this time it is more difficult as only the last part of each sentence is given. A revision element is included: some definitions are required together with a description (both based upon information supplied in the text). In addition, the students are required to list the criteria used for the classification. The final exercise at this level is to complete a large classification diagram and then to describe the classification referring only to the table.

Table 1



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Exercise C

A diagrammatic classification is given (in this case vegetables) with the criteria for categories provided; the main families are listed together with examples. The students are required to write a description of the classification of vegetables based upon the information given in the table.

The next step is to relate the writing practice given here to the ESP groups: for example, economists are asked to classify underdeveloped countries, to list their criteria (eg GNP) and to draw an appropriate diagram.

(e) Writing difficulties observed

The notional approach, as we have applied it, assumes a certain minimum level of competence in the language. Realistic tasks are set: for example, in the Unit on Interpretation of Data a histogram is given showing percentages of pupils in state secondary schools in England and Wales for selected years. One of the tasks is to comment on and compare the percentage of pupils at modern schools and grammar schools in 1973 compared with 1964 (this follows a Unit on comparisons). A later, and more advanced, exercise provides a graph showing the number of pupils by type of state secondary school in England and Wales over the last thirty years. Apart from commenting on the information contained in the graph, the students are asked to estimate the number of pupils in the different types of secondary school in the year 1980.

We have found that invariably some explanation or indication of learning strategy is needed for some language features and forms. Therefore, a bank of remedial practice material, on the principle of self-access, seems to be the most satisfactory solution whereby the tutor refers the student to the appropriate item. For example, the Unit on Description requires the use of the present and past simple verb tenses (both active and passive); both formation and form frequently need comment (eg stem + s).

A number of writing difficulties have been observed; these vary according to the mother tongue of the student, his educational background and obviously his level of competence in English. A common difficulty is that associated with choice of appropriate style. There is a tendency to put colloquialisms in formal academic writing; for example, a student must be shown that it is inappropriate to put "I think I've written enough. Thank you. Goodbye." at the bottom of an essay. Difficulties of spelling, appropriate lexis, concord and verb tense usage loom large for some students; cursive script, writing on lines and writing quickly from left to right are serious difficulties for other students. All these areas of difficulty need attention and we are trying, within the confines of limited time and manpower, to develop self-access practice material to remove some of the difficulties.

HOW TO ARM YOUR STUDENTS: A CONSIDERATION OF TWO APPROACHES TO PROVIDING MATERIALS FOR ESP

M K Phillips
C C Shettlesworth

(Revised version of a paper given at the Seminar on English for Academic Purposes – British Council 15 – 19 March 1976)

Teaching materials and classroom discourse

Criticism of ESP materials is in general restricted to the adequacy with which they meet certain theoretical postulates and to discussion of the postulates themselves. To our knowledge relatively little has been done in the way of surveying the output, so to speak, of the materials, that is, the kind and relevance of the language practice they engender in the classroom. This is perhaps the more surprising since the ultimate touchstone of any materials must be the pragmatic one of the amount and quality of the learning they stimulate.

The specialised nature of classroom discourse is becoming well-documented [1]. McTear, for example, suggests that language in the EFL classroom operates on three levels: metalinguistically, as the means of instruction; pedagogically, as the content of instruction; communicatively, as a general means of communication[2]. Other observers have made similar distinctions. This implies that the gap between classroom discourse (in any normal classroom) and the target discourse of the learning objective is perhaps surprisingly wide. We confirmed this hypothesis in our own case through a short study based on transcripts of classes in EST and which revealed that not only did the kind of discourse generated bear little obvious relation to communicative uses or language in scientific situations but even arguably differed from the teacher's perceptions of the kind of discourse that was generated[3]. ESP materials are designed as teaching materials and their centrality in the teaching situation consequently tends to reinforce the peculiarities of classroom discourse.

This is not necessarily an insuperable criticism: it entails the necessity of creating the conditions for activities which encourage the student to transfer the language taught in the classroom to use in communicative situations.

Problems in ESP materials design

The philosophy of materials designed for teaching purposes, however, inhibits the development of such activities. One typical illustration of this is the control of syntax and lexis that is exercised over specially written reading passages. It is difficult any

longer to accept such simplification as an adequate basic for control of written discourse; it is only one element and arguably not the most important. The current concern with the rhetoric of written discourse has clarified linguistic features peculiar t texts such as the devices used to secure cohesion on the one hand and the organisation of the information content, the management of coherence, on the other. Unless these aspects of text are accorded at least equal attention in the process of writing teaching texts to that given to the traditional criteria, the information structure of the text is correspondingly distorted and thus (i) the adapted texts cannot be viewed as a helpful stage towards dealing with authentic materials and (ii) this distortion renders the adapte text potentially more rather than less difficult to comprehend. It is clear, however, tha achieving a simplification procedure which allows for these considerations is less than straightforward as Mountford[4] has pointed out.

A further problematic area is whether the material provided by the course can be exploited in the way a specialist would use authentic materials; whether, for example, the operations performed by the student on text and diagrams correspond to the use a scientist would make of them. This is one aspect of the wider problem of providing students with an adequate introduction to the language skills involved in studying in English. It has become clear that in the teaching of language for academic purposes, it is insufficient to develop materials which aim to introduce the student only to the linguistic features which are salient in a particular field of discourse without paying attention to the strategies required by the student which justify the study of those features in the first place. It has rarely been the case hitherto that teaching materials attach sufficient importance to the behavioural aspect of specialist language.

Related to this point is the disparity that can arise in ESP between the demands of materials designed with a pedagogic objective and the requirements of the subject matter. The original purpose of the materials, which is to equip the students to deal with authentic examples of specialist discourse, can be negated if, in the process, fidelity to the subject matter is not maintained. The result of such inaccuracy or over simplification is often highly counter-productive; the credibility gap yawns.

A final point regarding the use of specially written materials is that of the techniques employed for student assessment. Given the powerful structuring provided by such materials, testing is normally conducted within the terms of the course. Such assessment is thus open to precisely the same criticisms as the course design; it tells us less about the student's communicative ability than about the extent to which the student has assimilated and can reproduce the course content.

Authentic materials

It is with such considerations in mind that we approach the specification of ESP courses at the Centre for English Studies and in particular pre-sessional EAP courses. These generally raise the problem of catering for groups of mixed and very specific interests and varying levels of attainment. Moreover, the time available for finding a solution is more often than not, strictly limited. These factors lead us to question the practicability of preparing specialised teaching material to a high standard when one

is dealing with a diversified demand often on a 'one-off' basis at very short notice. In ESP situations where such a solution is attempted experience has shown that either the time and manpower involved can quickly become costly out of all proportion to the economic viability of the course or the quality of the materials suffers. Yet in an effort to avoid the latter, institutions continue to suppose that the first alternative is the only solution[5]. Even were it always possible to adopt this solution, however, and it is of course very unrepresentative of the average ESP situation which is the need to meet an immediate demand with existing resources, it is, as we have seen, questionable whether the expenditure of time, effort and finance is justified by the end product.

We see one possible solution to the problem of providing specialist materials in different disciplines in a manner which is both practical and which avoids most of the theoretical criticisms levelled at specially prepared materials in the exploitation of authentic documents from the student's field of study. The absence of conventional selection and grading naturally entails a fresh look at the ways in which materials and the organisation of the classroom are structured. Nevertheless, there are two fairly obvious ways in which a degree of control over the content of authentic materials can be exercised. Firstly they can be graded in terms of *accessibility*. One would want to take into account the absolute length of the passage, the density of new information and the presence of supportive graphic features (see Appendix Ex 1). In addition it is not difficult to establish a cline of accessibility depending upon the sophistication of the information content, although caution needs to be exercised in accepting the relative simplicity of the popularised account, for example, which is frequently achieved at the expense of introducing an unrepresentative register of discourse.

Secondly it is possible to remove the forms of control from the materials themselves to the task complexity demanded of the student and for which the material acts as a stimulus. It does not always follow that because an authentic written text is being exploited that the objective of all lessons is necessarily reading comprehension. Indeed it must be accepted that total comprehension has often to be abandoned as a lesson aim. Moreover, the traditional classroom approach aimed at predicting the language the student needs to learn and allowing him the smallest possible margin of error in its acquisition is unlikely to hold good when using authentic materials, which, for the student, represent very much of a confrontation with the language. Consequently an approach which accepts the inevitability of error and aims at its progressive elimination as successively more accurate hypotheses are tested out against the evidence of the materials seems to be more appropriate.

Two Methodologies for ARMS (Authentic Resource Materials)

There seem to be two major ways of approaching an authentic text for use in the classroom. On the one hand it can be viewed as a repository of natural language use and on the other it can be seen as the stimulus for a variety of communication skills.

The former is concerned with explicating the text, the latter with developing skill transfers of the type involved in, for example, note taking. The former deals with information extraction, the latter with its application; both approaches therefore are relevant.

1 Natural language use

Authentic materials lend themselves admirably to procedures involving the induction of grammatical rules which can be tested against other occurrences in the text and generalised to create new formations. The criterion for selection of the text is thus (a) the relevance of the subject matter and (b) the importance of the language points exemplified and their frequency of occurrence. This is illustrated by example 2 which has been used by us for practice in the interpretation and production of complex noun phrases. The passage serves the usual purpose of specially constructed texts in that it exemplifies a particular language point with high frequency but has the marked advantage consequent upon its being a sample of discourse in that its authenticity is a considerable motivational factor and the linguistic point occurs in a natural context.

A less rigidly structured approach to the use of authentic materials for the teaching of grammar would be to adopt the cloze technique. There is no reason why the technique should not be applied to authentic discourse, indeed, it is arguably most appropriately applied to natural samples of language use. The rich context that is thereby provided furnishes a maximum of contextual clues to interpretation. Such an approach, illustrated in example 3, has two distinct advantages. Firstly it provides practice in inductive techniques for the interpretation of authentic discourse which are of vital importance for the student to acquire if he is to achieve autonomy in handling the language and in his own language learning. Secondly, the representative sample of language points covered by cloze procedure will ensure that problems of real difficulty to the student will be identified; the cloze passage can act diagnostically and provide the input to straightforward language improvement sessions. In effect the student selects his own personalised syllabus, a technique which is virtually impossible when using specially written pedagogic materials since they tend to be based upon a predicted item selection and sequence.

There always remains the possibility, however, that the unrestricted nature of the linguistic content will lead to immediate difficulties in the classroom. There is no reason why this eventuality should prove disruptive; there are several options open to the teacher. The simplest is to ignore the problem accepting, as mentioned earlier, that total comprehension is an unrealistic initial objective. We have found that our students are prepared to accept this limitation provided it is explained to them. The converse is to teach the point in question; although this may have the disadvantage of deviating from the teacher's preconceptions regarding his lesson, it is acceptable in an approach based upon the progressive elimination of error through a syllabus determined by the student himself. Finally, the difficulty can be positively exploited as an exercise in linguistic problem solving.

There is a more serious difficulty, however, to be faced. The adoption of a grammatical

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focus in this manner, whilst it is significantly different in technique from traditional approaches, has no implications for the authenticity of the discourse generated in the classroom. In other words, this use of ARMS may not overcome the problems mentioned at the beginning of this paper as inherent to the discourse generated by materials developed solely for teaching purposes. Authentic materials can only stimulate more realistic classroom discourse if a task-orientated methodology is adopted; this brings us to the second approach to the exploitation of ARMS, their use as a stimulus for the acquisition of language skills.

2 Language skills

It could well prove that the major difference between traditional approaches to language learning and the approach loosely characterised as ESP in so far as the latter does represent an identifiable unified approach, lies less in the attitude to language that the two techniques represent than in the essential difference in methodology characterisable as the predicted language item syllabus – whether this is expressed in structural or notional terms – as opposed to task orientated learning. The former, through having no specified task relevance, has to rely upon inventing teaching techniques which are extrinsically motivating as a result of the entertainment value of the devices used. The latter, by definition has no such problem; it is difficult, for example, to conceive of an EAP course which is not centred on study skills in English.

Authentic texts can be used as stimulus for discrete skills of the type involving different modes of information transfer. The information contained in the text as reading of listening passage can be transferred to the written mode as in report-writing or to the oral mode in 'lecturettes' through the mediation of note-taking. In order successfully to stimulate the art of taking notes in the lecture situation it is precisely the redundancy and richness of textual rhetorical clues provided by authentic discourse that is the point of the exercise. One kind of practice material we have devised is illustrated in example 4. It has also proved possible to use authentic texts to provide the content of sessions intended to practise seminar strategies. Obvously the presentation of lecturettes based upon the subject matter of the text will give students the opportunity to practise such techniques as interrupting, time-gaining, floor-keeping, clarifying etc. By dividing the class into groups and giving them different texts or different parts of the same text upon which to work with the instruction that they will have orally to convey the 'gist' of the passage to the other members of the class, a situation is created in which there is a real communicative need for these verbal strategies. Any passage in which the information is itemised can prove suitable for this purpose, each group having to communicate the content of one or more sections to the other members of the class (see example 5). It is also possible to manipulate the access different groups of students have to the information contained in a series of texts in order to set up a problem solving situation based upon the sharing of relevant knowledge.

Such techniques approach a full study skills simulation where students are given either individual research projects or a cooperative case study integrating different dis-

ciplines. In either case the full range of study skills will be required. The task of the teacher will be to monitor the efficiency or the skill techniques, to identify language problems as they arise and to prescribe remedial work where necessary. It is difficult to see how such task-orientated activities could be successfully encouraged by anything other than authentic materials and as a result a greater degree of authenticity in classroom discourse is to be expected.

Classroom organisation

It is clear, however, that one consequence of the use of authentic materials in this manner is that the teacher is no longer the undisputed authority on the text and must acknowledge the student's expertise in the subject. As a result, the teacher must adjust his role to meet the changed relations obtaining between teacher, student and text. Even in the case of a lesson orientated towards structural learning and where the teachers' role will most closely resemble the orthodox one, it is quite possible, as mentioned earlier, that it will be the students rather than the teacher who set the objective for the lesson. In classes devoted to a direct attack on the comprehension of a text the responsibility will be more evenly shared between teacher and student; the teacher's role will be an advisory one, that of, in effect, a linguistic consultant called in by the students to elucidate difficult points. We are thus suggesting that the emphasis has to be placed on student-centred situations where the focus is upon *learning* strategies rather than *teaching* technique and ultimately the student is responsible, and rightly so, for his own progress.

The student, for his part, must appreciate that the teacher is dependent upon him for the evaluation of difficulties and must be prepared to participate in a higher level of cooperative activity than is normally the case. Such an acceptance of his own responsibility is essential if he is ever to settle into further study in this country but by no means easy for students whose experience derives from several years of authoritarian classroom methodologies. Indeed one objective of the majority of our EAP courses is to achieve precisely this readjustment. If the burden of elicitation is thrown upon the students, then one of our tasks is to equip the students with the appropriate strategies to facilitate this role. We have often found that this is most effectively done in the context of fieldwork.(see example 6).

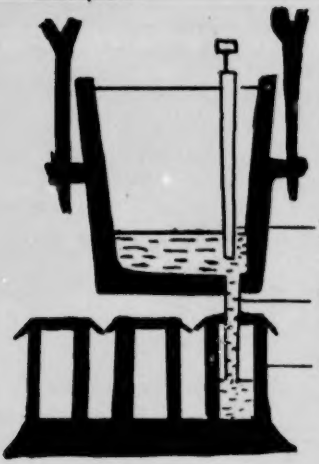
Group work also clearly has an important function. It allows for differential pacing within a class which can be vital when authentic materials are used. It permits the differential handling of language problems; it obliges the students to discuss their problems and then fosters a high level of cooperative activity in their approach to a text: this turns the lack of homogeneity in terms of linguistic level to advantage and permits the integration of students or widely differing achievement. At the same time, grouping within the class allows for different selections of material for different groups both to stimulate communication and to increase the degree of specialisation.

A parting shot-in the ARM: or Resources for Courses

We have argued that ARMS represent a more practical alternative – certainly they are readily and cheaply available in all subjects at different levels – to the expense and time involved in creating specially written materials which tend to suffer from the defects discussed in the first part of this paper and in any case are an unrealistic solution when faced with an immediate but short-term need. The course materials could then become less an ESP textbook in the accepted sense rather than a set of resource material together with procedural guidelines for their exploitation. These we are building up as a teachers report in note form on the manner in which they have used authentic texts (see example 7). Most ESP materials are an attempt to insert a specific subject content into an EFL framework. This attempt, we suggest, has doubtful validity. We attempt to tackle the problem from the opposite viewpoint, that of accepting the subject matter and the modes of behaviour appropriate to it and adapting or developing our exploitation or techniques.

APPENDIX **Examples of ARMS exploited for teaching purposes**

Example 1



INGOT CASTING

Ingots are a convenient form in which to handle steel, and the molten steel is released through the base of a ladle into moulds. When the metal has solidified, the mould is removed. Each ingot is of carefully pre-arranged dimensions and weights from which which articles of required size can be rolled or forged.

(from 'Making Steel', British Steel Corporation)

Example 2

The best way to Milton Keynes is via Heathrow

From November 25th to November 27th, officers of the *Milton Keynes Development Corporation* will be at the Post House Hotel, West Drayton, (Heathrow) between 10.30 am and 7.00 pm.

30

They'll be there to explain the very considerable advantages of moving a business to Milton Keynes.

As the map shows, Milton Keynes is an ideal location for most kinds of *manufacturing industry* and *distributive and service trades.* 60% of the country's population is within a *55 mile radius* of the city, housing is guaranteed to all *company staff* moving, and *factory sites* and *office space* are available to suit individual needs.

It could be well worth your while to come along to find out why. Especially since you'll be saving yourself a 55 *mile journey* up the M1.

Milton Keynes
The logical place
for your business

(from advertisement in 'The Guardian')

Example 3

In distinguishing its work from that of the trade associations, the CBI describes its work as 'horizontal' rather than 'vertical'. The CBI sees itself as being concerned not only with national questions which concern all or several industrial sectors but also with those which cut across industries and affect groups of firms (or all firms) which have certain interests in common; such as being close companies, overseas investors, _____ users or taxpayers. The CBI points out _____, only in matters of detail which are _____ prime importance to a particular sector can _____ Trade Association gain the ear of the _____; even in such circumstances, the CBI is _____ to take up the cudgels on behalf _____ in support of the sector concerned, probably _____ greater effect than the Association itself can _____.
(from 'Business' Open University)

Example 4

Transport in Britain

transport and transport planning are regarded by the British Government as an essential part of the management of the environment how we get to work how we carry our goods and passengers from one part of the country to another in particular, in and out of the conurbations can no longer be regarded as a relatively simple matter of building roads or providing trains transport today is an integral part of land-use planning of local authority finance of pollution and of regional development.

(from 'The Human Environment: The British View' HMSO)

Example 5

Some Basic Guidelines and Rules for Group Operation

When first operating in a group it is important and of real value to set down some of the factors which could cause friction amongst members.

The following Rules and Gudielines should be considered by all groups.

1 How is the purchase price divided? This can be divided by acreage, tonnage, gallonage or hourly use. It is advantageous to make all members of the group liable for the group's debts.

2 How are the running costs and other expenses divided? It is desirable for the group to appoint one member as a secretary who should keep the account books, machine maintenance records and, if necessary, a minute book of all meetings. The group should ensure, if they are borrowing money, that a bank account is opened in the group's name.

3 How is the work pattern organised? This can only be ..... etc.

(from Group Operations in Farm Management HMSO)

Example 6

PROJECT – Oxford Planning Department

Remember:

Excuse me .....

(Can you tell me .....
(Could you tell me .....

Could you explain .....

(I'd like to know .....
(I've heard about

In your talk/lecture/description, you said .....

1 Public participation in planning?
2 Current major planning schemes?
3 Extend pedestrian precincts?
– etc. –

Example 7

CENTRE FOR ENGLISH STUDIES

Materials Exploitation

Date ..... Group ..... Teacher .....

Skill: Note-taking/Listening Comprehension

Materials used: Transport and Road Research Laboratory:
tree diagram of organisational structure:
TRRL booklet, p.5.

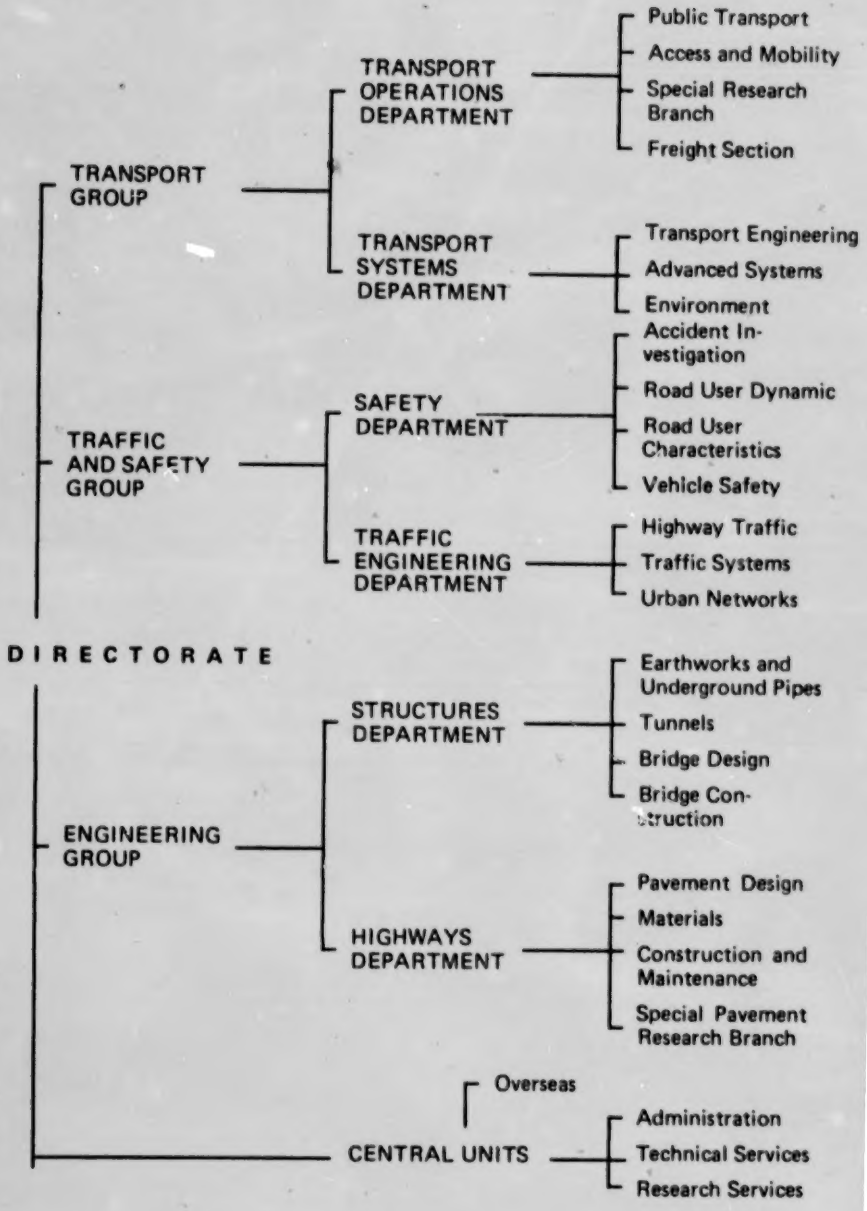
Duration: 25 minutes

Procedure:

1 SS draw tree – lines
2 Teacher 'reads' out information, with *some* redundancy features (recapitulation mainly).
3 Simultaneously SS write information on to the diagram, thus completing it.
4 Vocabulary written up, to avoid spelling mistakes. It is not a spelling exercise.
5 Language used by teacher: *is divided into; is organised into; to sum up.*

Evaluation: The group were able to write down all information correctly without section headings (see attached sheet) having to be said more than once. The temptation to repeat and repeat has to be avoided.

A useful exercise in highly guided listening for information, and showing comprehension by completing a given frame.


DIRECTORATE
TRANSPORT GROUP
TRANSPORT OPERATIONS DEPARTMENT
Public Transport
Access and Mobility
Special Research Branch
Freight Section
TRANSPORT SYSTEMS DEPARTMENT
Transport Engineering
Advanced Systems
Environment
TRAFFIC AND SAFETY GROUP
SAFETY DEPARTMENT
Accident Investigation
Road User Dynamic
Road User Characteristics
Vehicle Safety
TRAFFIC ENGINEERING DEPARTMENT
Highway Traffic
Traffic Systems
Urban Networks
ENGINEERING GROUP
STRUCTURES DEPARTMENT
Earthworks and Underground Pipes
Tunnels
Bridge Design
Bridge Construction
HIGHWAYS DEPARTMENT
Pavement Design
Materials
Construction and Maintenance
Special Pavement Research Branch
CENTRAL UNITS
Overseas
Administration
Technical Services
Research Services

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DEVELOPING A FLEXIBLE ESP PROGRAMME DESIGN

by R G D Chamberlain and
M K S Flanagan

The background and evolution of the British Council Communication Skills in English Programme for first-year medical students at King Faisal University Dammam Saudi Arabia 1977

Note

This paper is in two sections.

The first section outlines various factors in the general academic, administrative and social environment which affected our learners during the first year of the contract. Taking these factors into account the Project had then to extract enough information from the students to give guidance in our second year in judging levels of materials and to predict certain features of learner response.

The second section studies the evolution of the Project design and in particular discusses the changing proportions between ESP and fundamental code in the three stages of the 1976/77 programme for first-year medical students and attempts to set up a rationale for these changes. The development of the Faculty of Medicine's science syllabus(es), CSE/Faculty relationships, CSE/learner relationships, and the evolution of CSE materials design techniques all play a significant part in this rationale.

A draft of portions of Part II was presented at the APEI Conference, Teheran, March 1977.

SECTION I

1 Introduction

It is important to differentiate between servicing roles undertaken by the CSE Project in the two academic years of its life. In 1975/6 the Project devised and taught a range of materials for first-year students of architecture, agriculture and veterinary science. In 1976/7 the Project has primarily been concerned with a programme for first-year medical students – the programme examined in this paper – together with programmes for second-year students in the other Faculties already mentioned. This has meant that to date no programme has been taught more than once. The Project consequently has had to operate without really satisfactory controls.

Despite these and other handicaps various important guidelines have appeared. Foremost amongst these is that materials have to accord with student notions of progress in their vocational studies. Related to this are the indications that materials must also take specific account of available information relating to the learner's exact language attainments, his background at home and in society, his assumptions about university life, his vocational and social aspirations. The pattern of such factors in any given institution is likely to be unique even if in particular respects analogies can be drawn with ESP programmes elsewhere. The controlling factors in an Arabic-speaking society are at any rate certain to differ substantially from those which govern EFL programmes devised for learners at universities in America or Britain. In situations where L1 interference is consistent and strong, learner standards, notions of relevance, and notions of teacher-pupil interaction all work against the use of non-interference methodologies of the type described by Allwright (1976).

Background details for the students concerned also indicate that the accepted polarities of instrumental and integrative motivation may need to be modified. Whilst the motivation for English Language Learning in this particular context – Saudi Arabia – will normally be vocational and therefore strongly inclined to the instrumental polarity it can be observed that a slightly opposing factor emerges. Students rich enough to go to the USA or Britain for their vacations need holiday English. Those training for medicine expect to do postgraduate work in an English-speaking country possibly even to practise there for a time. There is no reason why a student who would strongly resist integrative techniques as a trespass on his cultural preserves might not require culturally significant language patterns for purposes of social exchange. No intention to identify with

the culture of the target language need be implicit. The need may simply be regarded as an extension of instrumental aims in a socio-cultural framework which is coping with complex adjustments to modern technology and technology-based life-styles.

Finally ESP programmes by emphasising communication skills and by promoting language in action reflect the increasing attention being given to learners' specific language needs. ESP programmes are not the sole prerogative of universities and neither are those classroom techniques involving processes of peer-group interaction for language learning where the teacher is restricted to management activities. These latter can be effectively employed early in the school language learning system (Johnson 1973) and with sensitive treatment continued to upper school level so that students become accustomed to varied forms of communicative initiation and interaction. It is time to devote thought and planning towards an ESP founded on realistic and cautious appraisal of the sociolinguistic environment linked to an active methodology. Given starting points well within the school system at differing levels according to situations this would make the work of bridge courses such as ours very much easier. Perhaps most important of all it would help to alleviate the concern sometimes felt by administrators and others faced with what appear to be overly drastic changes in ELT approaches and operations.

2 The General Environment

(a) At the time the Project was set up not much hard information was immediately available about the new University's specific aims. Planning was therefore possible only for the immediate needs of the three established Faculties. There were nevertheless certain features of the working environment already indicated.

i the University was intended to be English-medium.

ii the student intake would be required to have passed the national secondary school leaving certificate examination.

iii University admission requirements did not specify a minimum standard of performance in English in this examination.

It was subsequently found that in fact student levels of attainment were on average very low.

(b) Initial Conditions

When the Project's first classes began conditions were very difficult. Factors which dominated the situation were:

i an urgent need to reassure the students and help them build up some confidence and to offset the dispiriting effect of poor attainment levels.

ii having to cope with makeshift accommodation generally, particularly classrooms and makeshift A/V and library facilities.

iii having to detach staff to locate and clear equipment at the customs warehouses

iv being understaffed to handle the intake properly given the unexpectedly low standards and having to adjust to frequent changes of short-ter m teaching staff.

v having an intake which was itself more numerous than anticipated.

(c) **Student Attendance**

Towards the middle of the second semester, 1975/6, student attendances sank sharply. Discussion with students and analysis of the daily registers kept by Project staff and monitored by the Project administration suggested three likely causes for this decline.

i difficulties in regular and punctual transport arrangements for students between hostel and split campus areas.

ii low morale amongst the under-achievers.

iii the premature introduction of science courses.

No real solution was found for 2.3.1 for the rest of the academic year. Levels of morale tended to fluctuate but the problems of 2.3.2 and 2.3.3 were equally difficult to solve. Clearly every encouragement had to be given to these first-ever students but the majority of them really needed a full remedial English course before being introduced to full basic science courses. Also not many exhibited a clear commitment to the discipline which they were studying. Several requested transfers during the course of the year.

3 The Setting for the Second Academic Year, 1976/77

In the second year the Project had to accomplish two different tasks. First it had opted to teach the 1st year Medical students – a completely new programme. Second it had to continue into the new academic year a programme for each of the Faculties previously taught. In planning the new programme the experience gained in 1975/6 was carefully taken into account.

(a) While it was anticipated that student attainment levels would be higher than previously if only because places could be advertised in good time, a relative yardstick was also now available from the 75/6 intake. Further, during 75/6, Project support personnel from London had been able to observe a range of secondary school classes in the Dammam area and gain some insight into likely first-year standards. There seemed to be evidence that the new intake would be of higher standard than that for the previous year.

(b) If this were indeed to be the case it was anticipated that student motivation would be greater.

(c) With a sharply practical approach to a new programme resulting from awareness of physical conditions, Project planning moved away from unduly idealistic servicing notions. It was clear for example that there would be problems attaching to an over-optimistic audio-visual component; also several shifts in physical location could be expected over the year.

(d) Student attitudes over the first year as they had grown accustomed to their disciplines seemed to point towards the need for a programme embodying a carefully-planned increase in ESP intensity. This would mean initial concentration on remedial and general English during the intensive phase of the new programme lasting about 9 – 10 weeks, passing on to more direct servicing elements in later phases. To facilitate such planning, to select and prepare materials and to initiate new staff an Orientation Seminar was arranged for September in London.

4 Orientation Seminar

The Seminar lasted for two weeks approximately. It was an invaluable exercise. The following points can be noted.

(a) Achievements

i The selection and purchase of text-books (for language laboratory and ESP courses).

ii The selection and purchase of a number of films of general scientific interest (Shell and BP) together with a complete set of the BBC TV 'Slim John' ELT films (but see 4.2.1).

iii The writing of certain units for use in the intensive phase eg Language of Maths.

iv The writing of the first Student Brochure which outlined the stages and rationale and objectives of the CSE programme for students, University administration and Faculty staff.

(b) **Shortcomings**

i Not enough groundwork was done to investigate film resources before the Seminar. More (and more basic) science films were needed (in colour) to replace the complex and often irrelevant Open University ones. In the short time available however team members did locate some excellent items.

ii Planning and purchases concentrated too much on the intensive phase and did not take into account later needs or needs for existing second year courses to which the Project was committed.

iii Not all participants were satisfied that the faults of the original project design were adequately explored.

Experience has proved that generally the Project team's judgement of levels enabled it to select a suitable range of materials. The broader issues of Project design are now attracting more serious attention within the relevant departments of British Council Headquarters.

5 Relations with the University and BC Headquarters

Experience in 1975/6 and from other ESP operations testifies to the importance of meaningful professional relations within the host institution to such a programme as ours.

We may distinguish under this heading relations with:

(a) students

(b) University administration

(c) Faculty teaching staff

Students

It was decided that for 76/77 our students should be given clearly specified though necessarily brief details of the content and aims of the CSE Programme. While the student brochure laid down these details in writing, in practice much of the same information was conveyed to (b) and (c) by personal contact.

Senior University personnel are usually very busy and can be absent on business so that personal contact was essential. It is the client's expectation that on the professional side package ELT operations such as this Project ought to be able to run themselves without fuss; there was therefore also needed:

(d) a regular working contact with administrative officers so that day-to-day problems such as attendances, use of rooms, etc could be resolved.

(e) a channel for communicating the rationale for the ESP content in our ESP programme to Faculty colleagues. Misunderstandings about this can easily occur. The building up of satisfactory relationships with Faculty is vital for this reason. The fundamental points of an ESP-General English relationship can through this channel be made familiar to the University at large. This process can often occur through meetings to which Project staff because of their servicing role are not invited. That is, meetings occur at which Faculty members may need to interpret CSE views and techniques to each other and to the Dean and Faculty; hence opinions and information pass to the Council, Ministry etc.

6 Learner Motivation and Expectations

(a) Broad learner motivational features have been mentioned in the introduction. For the Medical programme it was anticipated that students would enter the University with relatively high standards and might hence have greater motivation. In fact the Medical students have proved to be vocationally aware and more committed to their perceived spectrum of studies than the students taught in 75/76. Corollaries of this seem to be:

i They are concerned to learn English and in English.

ii They therefore accept the English-medium nature of their University and its courses and the particular relevance of this to Medical studies.

iii They are quick to perceive and appreciate the relevance of ESP in their English programme.

(b) Student feedback has also indicated that notwithstanding this relatively serious approach a purely ESP-oriented syllabus would not be acceptable. The ESP/GE mix which is studied in Part II of this paper is a direct result of student feedback. Students are anxious to speak as well as to read and write English often for a variety of personal purposes. These purposes may be set out as a list of assumptions and expectations:

i that English will be needed to write exams, read texts, listen to lectures, follow practicals, and participate in seminar discussions. Subject lecturers confirm this approximate range of need.

ii that English will be needed for communication with doctors and members of the medical services (nursing, hospital staff, pharmacists, specialists.)

iii that in pursuance of their medical studies students are very likely to visit English-speaking countries (further courses etc.) in the future.

iv that to improve their general English it will be increasingly to their advantage to visit countries such as Britain or the USA possibly fitting in a vacation language course with the visit. They will then need to communicate with other students of different races through the medium of English. They clearly perceive the importance of being able to operate effectively within the usual range of social exchange (eg travel, banks, Post Offices, restaurants, entertainments, discussion, shopping). They specify almost without exception the need to stay in a native-speaker domestic environment as an aid to proficiency and as a way of minimising involvement with other Arabic-speaking students.

(c) When prescribing the kinds of General English to be injected into the overall programme taking account of these expectations it is important to treat with sympathy the students' desire to enjoy themselves on their travels and to remember that many will have the necessary means.

7 Summary of Section 1

(a) The main points which emerge from this sketch of the environment are therefore:

i The importance of an initial assessment of student levels.

ii The importance of assessing student motivation and interests.

iii The importance of explaining the nature of an ESP programme to the host institution and its members.

iv The importance of an initial investigation to plan and prepare for such a programme. Careful pre-selection of materials must be made and based on discoverable factors from i and ii.

(b) Additionally, close thought must be given to the amount of time allotted to A/V components such as film and OHP transparencies and very careful consideration given to precise details of practical L1 facilities, since these will affect courses chosen or prepared.

(c) Administrative and executive staff concerned with a new project need to assess its problems on the spot and in consultation with field staff.

SECTION II

1 The ESP Component in the Medical Programme*

(a) The design of the KFU CSE Programme and its particular mix of ESP and General English has been directly affected by perceived student needs. The three stages of syllabus content in the Programme have aimed to reflect the students' increasing involvement in their basic science studies. Major factors in the evolution of the CSE syllabus designs were:

i No basic science teaching took place at all during the first eight weeks of the first semester while the CSE Intensive Course (Stage I) was taught.

ii After the first eight weeks with the CSE Intensive Course completed students began to attend lectures and laboratory sessions in Chemistry and Biology, and Stage II began in the English CSE programme (cf. Rixon and Boler, 1977). At the same time students received science text books, and detailed lecture handouts from the Faculty staff began to flow.

iii In the second semester, corresponding to Stage III in the CSE programme, Physics classes and laboratory periods started. The students' basic science load then reached its maximum for the current academic year.

(b) While the overall structure and levels of the English syllabus resulted from assessment of the academic and administrative enivronment described above, ESP content became more directly influenced by the progress of the courses in basic science. As the timetabled hours for English were reduced and those allotted to science classes increased, so the CSE team had to concentrate on teaching communication skills using more restricted components. Equally, the question of ESP-GE proportions became increasingly significant. We can best survey this in three abbreviated syllabus outline given as Figure 1. We can see from this table that:

*Male students – 44
Female students – 37

Figure 1

SYLLABUS COMPONENTS OF CSE KFU PROGRAMME – STAGES I II III.*

Intensive Course – Stage I

Component	Language Bias	Weekly Hours	Team Taught
Nucleus	ESP	51	✓
Language of Maths	ESP	4	X
Lexis	ESP	3	X
SRA Reading Laboratory	GE	3	X
H/writing/Dictionary	GE	3	X
Language Laboratory	GE	5	X
Video	GE/ESP	4	X
		27	ESP C. 50%

Transitional Stage – Stage II

Nucleus	ESP	3	✓
Video	ESP	1	X
Science Comprehension	ESP	2	X
Laboratory Procedures	ESP	3	✓
Language Laboratory	GE	2	X
Lexis	ESP	1	X
SRA Reading Laboratory	GE/ESP	3	X
Listening Comprehension	GE	1	X
		16	ESP C. 70%

Stage III

Focus-Science Comprehension	ESP	1	✓
Note-taking	ESP	2	✓
Research/Report Writing	ESP	2	✓
Language Laboratory	GE	1	X
		7	ESP C. 85%

i The approximate proprotions of ESP to General English were: Stage I 50%; Stage II 70%; Stage III 85%.

ii Proportions increased consequent upon
- students first attending science classes
- reduction of timetabled hours for English after the end of the Intensive Course (Stage I).

* Does not include test or tutorial periods.

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iii While the SRA Reading laboratories can fairly be classed as General English, particularly in the nature of their subject range, the Research Laboratories fall more within the scope of ESP. Practice of organisational skills is the chief concern. Topics not only require more scientific grasp but have to be presented through the use of fact-finding techniques. In addition team members using the Research Laboratories began to develop materials for organisational skills practice which required students to use available library facilities. This set the scene for the major individual written written research projects planned for this component in Stage III.

(c) It was generally felt that as the study of basic science commenced and faculty required the study of a variety of upgraded science texts in English certain student reactions could be predicted:

i Interest would swing from English to Science, the 'real' material of their professional training.

ii As workloads increased both on campus and at the hostel so students might pay less attention to completing tasks set by the English programme. This might happen even though English classes remained enjoyable. This reaction could probably only be offset by regular tests.

iii From this point on students would welcome and benefit from English course components directly relating to science studies, that is, an increase in relevant ESP.

iv Students would not want General English totally abandoned since their declared interests constantly stressed the desire for basic multi-purpose oral fluency as discussed in Section I.

(d) While these predictions were largely confirmed students expressed serious concern that their English timetable was going to be reduced in Stages II and III (though from sheer lack of time-table space, reduced it had to be). Nevertheless, interesting thoughts about priorities could arise from this. Students requested specific help with their immediate problems of:

i understanding lectures given in English at varying paces and with varying amounts of simple explanatory language

ii understanding handouts.

(e) From feedback such as this the design of the Stage II programme evolved and can be seen in two clearly distinguished sections:

i Extension of Intensive Course materials, eg.

- lexis classes incorporating vocabulary from science materials
- extension of dictionary studies into the use of texts and encyclopedias for practice in reference and organisational skills
- continuation of 'Nucleus' English of General science
- use of the English Fast Language Laboratory General English course; Units 5 – 20

ii Components integrating with science syllabuses:

- science comprehension materials written by the CSE team designed to teach elements of textual analysis and also provoke discussion
- the course in Laboratory Procedures*
- a series of films generally though not closely relevant to ongoing science courses. Worksheets were prepared as supplement to the audio visual experience.

(f) Of these various components some were team-taught. The teams were made up of a science-trained and a language-trained specialist. Because of staff problems team teaching was not possible in the women's section. Team-taught components particularly included science-oriented materials (see Figure 1).

(g) The 70/30 mix of ESP and GE in this transitional syllabus proved satisfactory, though setbacks occurred with the main General English language laboratory component 'English Fast'. The laboratory ordered by the University never came into use because of problems arising after installation, consequently individual oral practice was not possible. Substantial supplementary drill workbooks, designed by members of the CSE team intended in any case as an integral part of the GE package, offset student concern at what was as much a managerial as a technological misfortune. The full loss of this GE component was still very significant and demotivating.

(h) For Stage III, the target communication skills of listening, speaking and writing were to be given special emphasis. Students were told that after the intensive reading practice they had already received, they were expected to be more self-reliant in this area. Four fields of communication, primarily biased to ESP and particularly to sub-skills of which the relevance had emerged were

*See supplement pp. 19–21

specified for the students in their Stage III introductory handout:

i Retrieval from information sources. This embraced skills involved in handling texts and graphics and note-taking from lectures or media.

ii Peer communication in discussion, both receptive and active; presentation of arguments, following and giving instructions, explaining.

iii Communication with teachers in lectures, practicals and tutorials, both in purely receptive (so-called) and active situations. Here stress was placed on the encouragement of interrogative modes and style.

iv Communication with a variety of native English speakers covered by the GE English Fast component (now Book II), but still unable to use Language Laboratory facilities.

(i) The most conspicuous fact which emerges from the evolution of the Stage III design is that it has tended to focus on direct active communication. Experience taken directly from Stage II operations, and gained also through our consultative relationships with Faculty staff, guided this development. For example students in Stage III discuss and question each other's research plans. They take notes in simulated lectures and then discuss the notes and note-taking techniques. They study and discuss critically samples of relevant science-oriented text. (ELT based-"Focus"). Here, relevant interaction takes place. Students are being trained sometimes directly sometimes obliquely in profitable techniques for learning from a variety of teachers. (Johnson, supra, 1972). The proportions of CSE teachers per class in the team-taught ESP Stage III components (1–8) increase opportunities for such interaction, and help to ensure activity by every student.

(j) In this section it must finally be pointed out that the approximate proportions of ESP to GE in the three stages of the CSE programme:

Stage	I	c.	50%
Stage	II	c.	70%
Stage	III	c.	85%

were not entirely pre-arranged. The mixes evolved, as requirements seemed to indicate, and as components developed or changed their character. Thus the proportions should be seen more as an outcome than a preconception. While this does not imply that there was no forward planning of main content skills areas it suggests – rightly – that within these areas there was plenty of

room for manoeuvring the bias or emphasis of the materials and courses. Most importantly, the mixes can be seen as responding to student needs as these clarified and strengthened.

(k) *The General English Content*

Students entered the programme with varying EL strengths. For all of them, however, the following instructional ingredients were needed, especially in the Intensive Phase before their science lectures began.

i Background reading materials to broaden lexical and topical experiences – a wide selection of readers would have been very useful here, but useless later, when student inclinations and hence time for this kind of language activity evaporated.

ii A language laboratory course, team designed, based on a communicative syllabus overtly (eg for students) grammar/situation in outline, covertly incorporating the essence of a restricted notional-functional language exchange system. Allied to this would be written exercises moving from sentence to paragraph work. Such a course would be both remedial (with heavy concentration of verb patterns and concord in specific elements) and progressive. The flavour should be Western/international. Oral practice would be paramount. There would seem to be no reason why students should not be provided with an up-to-date English grammar, for reference only. Finally, such a course would ideally be followed by a role simulation series to exploit oral skills in relevant situations.

iii A lexis course, much as presented here, for weekly learning encouraging good spelling habits, accompanied by visuals (transparencies or slides) as A/V conditions permitted.

iv A visual component, language-based. This could be, for example, a condensed, videoed version of Slim John, enabling the whole story to be covered in perhaps 9–10 weeks at 1 period per week.

These are comments after the event. The components of the actual General English course as listed fulfilled some but by no means all of the requirements set out above. Before going on to analyse how, in practical terms, the structure of the ESP/GE programme evolved, there are some comments to be made about reading comprehension materials, as handled either from an ESP or GE angle. Current research tends to focus on discourse analysis and rhetoric, on linkers, and reference items, anaphoric, cataphoric, and exophoric. However, it is by no means certain that working with students on these textual features,

which often required very complex awareness of meaning and logical processes, teaches anything. For instance, appreciation of straightforward anaphora in text (it, they, etc.) can be taught quite rapidly, but experience has not yet shown that students gain much from this or that it helps them to disentangle obscure or complex texts. Likewise, discourse markers: here one is entering a seriously sophisticated linguistic zone in trying to teach the force, for example, of 'nevertheless' or even 'hence', or trying to categorise and expound methods of restatement. One is crossing the boundaries into stylistics – it is tricky ground for the EFL learner in our necessarily restricted regions. What discourse analysis requires for the EFL learner is perhaps a condensed course focussing on selected markers, using a variety of illustrative texts, and attempting limited oral and written production as follow-up. The objective would be to instil general awareness without going deeply into abstraction.

(I) Let us look now at three of the factors which significantly affected the development of the syllabus outlines discussed above, for stages 2 and 3. These were:

i Relationships with Faculty staff from which a more specific perspective of students' needs and servicing requirements emerged.

ii 2 Relationships with the learner, providing sensitivity towards changing attitudes to the ESP-GE mix at sifferent times.

iii Reactions of the learner to different types of materials. Each of these factors will now be given separate though brief treatment here.

2 Inter-Department Co-ordination

The importance of this factor cannot be over-estimated. The writers' conviction is that no ESP project can hope to work effecitvely unless there is a continuous and positive dialogue between staff and the staff of whatever faculty the project is servicing. Communications with counterpart faculty should cover:

(a) Content and chronological presentation of science syllabuses. A sample of syllabuses is given below. (Figure 2)

(b) Use of these syllabuses in the selection of topics for materials-writing.. (Put to good use by CSE team members).

(c) Establishment of personal relationships so that faculty are seized of ESP concepts and methodologies.

(d) Conversely ESP teachers being seized of faculty notions of the resources of a servicing unit, and of ways in which ELT staff can give specific aid.

FIGURE 2 SAMPLE SCIENCE SYLLABUS OUTLINES – SEMESTER II 1976/77

WEEK	CHEMISTRY	BIOLOGY	PHYSICS
1		The skeleton	Measurements
2		Blood-Structure and and function	Calculus, 2 dimensional motion
3	Structure of Atoms	Nutrition	Newton's Laws – Work/energy
4 5	Chemical Bond Periodic Table	Respiration	Mechanics of Extended bodies Elasticity, Moments
6	Ionic Equilibrium		
7		Reproduction	Vibrations: Resonance
8	Oxidation		
9	Chemical Thermodynamics		
10	Chemical Kinetics		
11		Ecology	Eye + Vision/Special Microscopy
12	Radio Chemistry		Interference, Laser Ultraviolet Infra-red
13			
14			
15			
16			

(e) Discussion of faculty expectations:

- of students' communicative use of English when working in science
- of the kind of written English offered by students in assignments or examinations

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(f) At the least some visits by ELT staff to science classes for first hand experience of student language problems.

(g) Informing faculty staff about general student problems emerging as the science courses progress.

(h) Familiarity amongst ESP staff with science textbooks and handouts.

2.1.9 Supply to the ESP unit of such textbooks and handouts, together with syllabus outlines.

(j) Supply of similar items from the English Programme to the faculty.

(k) Maintenance of close relationships in day-to-day operations of timetabling, tutorials, a/v aids exchange, discussion of student tests or examination results, and hence individual student problems.

The KFU CSE team has been largely successful in achieving satisfactory relationships with the staff of the Medical College from the beginning, and this has been evident to the students. It has helped the students to appreciate the relevance of their ESP/ELT materials. They feel that a personal service to them, and to all which most directly concerns them, is being offered. The creation of such an atmosphere seems to be essential to the success of this kind of EFL operation.

3 Relationships with the Learner

(a) Throughout the life of the Dammam Project a deliberate effort was made to establish sympathetic staff-student relationships. This was effected by means of a tutorial system. In the Intensive Course, Stage I, students were timetabled for tutorial periods when they could discuss problems, both academic and personal, with their tutors. CSE staff worked in tutor pairs, one science-trained and one language-trained, to provide the maximum response to a variety of problems. In Stage II the timetabling of actual tutorials periods was no longer possible but for Stage III small-group tutorial relationship can be, for example:

i Close discussion of individual problems.

ii Close study of individual performance in examinations and tests.

iii A fail-safe mechanism for weaker students. Ranges of ability are wide in KFU.

iv Free communication opportunities for both brighter and weaker students.

v The creation of a general climate of care and personal concern.

(b) The development of such relationships becomes more important as the time devoted to English decreases. As the year goes on direct learner contact between teachers of English and their students decreases steadily. It is necessary therefore to ensure that maximum communication can take place even if contact is less frequent. A basis of mutual trust and understanding is both means and end.

(c) It may be of interest here to note that while in the first stages of the CSE KFU Medical programme students had to be streamed, streaming has now been abandoned. In the third stage, mixed ability groups have been organised. It is too soon to comment other than to say that so far the high fliers have been kept busy and have not tended to dominate whilst the weaker students have responded in a livelier way than hitherto.

4 Materials and Audio-Visual Aids

(a) As the CSE Programme evolved, and student reactions to materials were constantly assessed, factors emerged which seemed highly relevant to the choice and supply of software.

i 1 A mixture of team-produced materials and published text-book input seemed desirable. In our particular situation we made good use of and hopefully were not dominated by, a range of good text-books. The following points are worth making:

ii Published ESP-based texts – such as "Focus" and "Nucleus"– offered opportunities for the presentation of relevant ESP material in an interesting form.

iii The sparing use of such texts would conceivably highlight CSE–produced materials: no use of them at all might well be counter–productive.

iv Experience indicated that students reacted adversely to an overload of handouts or stencilled texts from the Project. They were already endeavouring to cope with such input from the science faculty.

v To balance the proportions of stencilled printed materials, an input of visual material relevant where possible but selected primarily for interest, was felt to have motivational value. This entire area needs more careful planning for a well balanced programme.

4.2 General student feedback has suggested that the syllabus components outlined in Figure 1 gave a reasonably happy mix. This in turn may suggest materials-writing projects should aim to operate through a carefully balanced choice of d.i.y materials and of published courses. Useful guidance as to suitable/unsuitable styles, grammatical content, graphics treatment in published materials created in the field. It does not seem unreasonable to assume that successful materials will eventually end up in book form, if only for appearance, durability, and portability. Furthermore, we still appear to be instilling into our students the mechanics of a book/journal based civilisation, though hopefully in a properly critical spirit.

5 Summary of Section II

Main points and implications can perhaps be summarised as follows:

(a) In a project of this nature, in this specific environment, ESP GE proportions can be seen in terms of a cline. Proportions at different points along this cline are likely to be affected by such factors as declared student needs and inputs from the science faculty as their courses progress.

(b) Satisfactory relationships with counterpart faculty are vital in order to ensure relevance of materials and reinforce student English Language Learning motivation.

(c) A tutorial system such as the one described above has helped to establish a satisfactory learning environment.

(d) Experience in this Project suggests that a cautious blend of published materials with the team's own work can strengthen the impact of the total learning package.

(e) The underlying grammatical design assumptions of the chosen textbooks were known to Project staff, who were then free to concentrate on the lexical and structural demands of the specific language problems.

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Nucleus : English for Science and Technology: General Science. M Bates and T Dudley-Evans; Longman 1976

THE FOUNDATION COURSE IN LABORATORY PROCEDURES AT KING FAISAL UNIVERSITY CSE PROJECT

by Tom Jones

Background to Course

There was a need for the CSE team to teach the medical students in a real science context. The students were soon to be faced with practical science classes with very little, if any, experience of working in a laboratory, and with no experience of report writing, either in English or Arabic. Together with the fact that the CSE team had science specialists, this presented an excellent opportunity to fulfil the need.

The course in laboratory procedures was designed to put the medical students into a situation in which the language used would be as encountered in their science practical classes. The written language of the course would be presented in the form of instructions for experiments and the students would produce reports of the experiments carried out. The spoken language would be natural to a science situation and in the form of questions relating to activities in the laboratory, descriptions of apparatus being used, simple explanations of activities and so on.

From the teaching point of view the essence was simplicity so the language specialists could teach the course without the presence of a science specialist. The situation did in fact arise in the first weeks of the women's course. Sophisticated apparatus, practical techniques and concepts were to be avoided. However, the students' interest would be maintained by the fact that they had not carried out experiments by themselves before.

Outline of Course Objectives

1 Extension of lexis already introduced in "Nucleus" modula.

2 Comprehension of simple experimental instructions.

3 To familiarise students with basic laboratory procedures, including handling of equipment and materials, setting up an apparatus and safety precautions in the laboratory.

4 To enable students to make and record various observations.

(a) qualitative – eg: heat changes, changes of state, colour changes.

(b) qualitative – eg: measurement of mass and temperature and changes in these, also rates of change.

5 Tabulation of results.

6 Processing of data collected. (graphs)

7 To develop students' deductive skills from observations made and from processed data.

8 To enable students to write a simple accurate report of an experiment carried out. (including diagram drawing as an aid to descriptions).

These objectives correspond with those of the transitional phase of the CSE medical programme in the following respects.

1 Extension of the skills introduced in the intensive phase of the programme.

(a) Speech skills – by individual and group discussions during the laboratory sessions.

(b) Receptive skills – understanding written instructions and translating these into action.

(c) Productive skills – data recording and processing and ultimately report writing.

(d) Organisational skills – tabulation of results and observations, setting out a report.

2 Development of speech skills – see 1(a)

3 Integration of materials with input from the medical faculty staff.

The course content was agreed in consultation with the science staff who were anxious that the course should be taught.

Course Timing and Content

The course covered a ten week period, three hours being taught each week. There were two units, the first consisted of six simple general science and chemistry experiments and the second unit consisted of four simple physics experiments. One experiment was carried out each week in a two hour laboratory session, the third hour was a follow-up classroom period.

During the classroom period students were given drills related to report writing, model reports were discussed, and incomplete reports were completed by the students, covering each section of a report. Eventually, the students wrote their own reports on experiments.

Teaching Method

All lessons were team-taught by a science tutor and a language tutor, each team developing its own approach. In general the classes followed the same pattern; the experiment was introduced and any new lexical items, especially names of apparatus, were explained. The students then carried out the experiment individually. Problems arising either from the text or from the experiment itself created opportunities for a great deal of useful oral work on an individual basis. The laboratory session was rounded off by a group discussion of the experiment, any difficulties encountered, the results obtained, and also if necessary explanations of any results not anticipated!

Testings

Various components of the course were included as part of the weekly testing programme. At the end of the first semester the students were given a practical test which consisted of carrying out an experiment from written instructions and writing a report on the experiment.

Results of Final Test

77 students took the final test and were awarded as follows:

	Percentage students in each grade
Grade A (79% – 100%)	36
Grade B (69% – 79%)	29
Grade C (59% – 69%)	28
Grade D (49% – 59%)	7
F below 49%	2

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General Comments

The pay off from the course was both linguistic and scientific which gave it a high motivational factor. However, the focus was on using language rather than on the scientific content of the experiment. The tangible outcome of the course was the students' ability to write a simple and accurate report of an experiment which they had carried out themselves. Thus the major aim was achieved. Oral assessment as in all language courses was subjective but satisfactory.

It was necessary to monitor the practical aspects of the work throughout the course and to make modifications to instructions and apparatus lists occasionaliy. Brief weekly meetings were held to discuss each experiment. It was essential to ensure that the experiment actually worked.

The Faculty laboratory technicians contributed to the success of the course by organising apparatus and materials for the five laboratory sessions per week. Relations with the science staff of the Faculty were cordial and organisation of the course thus made easy.

This course was specifically designed for a group of medical students in their first year at university. This particular group had little or no experience of working in a laboratory and were therefore not put off by carrying out simple experiments.

The course could, however, be adapted to other situations using more sophisticated experiments if appropriate. Cooperation with the science department, availability of laboratories and adequate assistance in organizing the apparatus and materials are crucial. The use of science specialists in an English language context is probably also necessary for this type of course, although, as mentioned earlier, the women's course was taught without a science specialist for several weeks.

THE CSE PROGRAMME FOR MEDICAL STUDENTS AT KAAU AND THE SCIENCE OR LANGUAGE DILEMMA

Philip King

The CSE programme for first-year medical students runs for about 440 hours. It is a tapering programme in which 25 hours a week for the first 8 weeks gradually reduce to 6 hours a week for the last four months. The science lectures and labs for the students increase correspondingly from 5 hours per week (starting in the fourth week of term) to 25 hours per week by the second semester. This contrasts with the English programme for the Engineering students, which is essentially not accompanied by ongoing science courses. This divergence suggests different designs for the two programme and in fact although two years ago the same design was implemented for students of bo faculties (which were at that time both expected to run a preparatory year of English before other courses were introduced), the two CSE programmes have each gone their own way as a result of the differing situations in the two faculties.

The first eight weeks of the CSE medical programme are regarded as preparatory, and the main objective in this time is to improve students' ability as far and as fast as possible, so that they can function the more efficiently in an English-medium faculty, ie understand lectures well enough to take notes of important points, be able to ask questions, write up reports of lab activities do any reading assignments and do exams in English. Of the language skills, listening is most important here.

For the rest of the programme there is a concentration on reading and writing skills, with the others subsumed under these headings – both reading and writing activities are designed to give plenty of opportunity for speaking practice, for example. This is also the time when we are most directly in a servicing role, since for whatever we do, the starting point is the science which the students are doing in the faculty.

This means that the question of whether to have a science-based course from which you derive the appropriate language, or a language-based course in which your content derives from different areas of science, is no longer for us a matter of debate: we have opted for the former. The coherent science is already there and it is for that that the students have come to the faculty. We take the same areas of science and can help to reinforce their understanding of the content, allowing them to bite on the science and swallow the English with it. This approach also enables us to provide them with guidance as they carry out higher-level, more complex tasks of selecting and combining both language and content, which matches what the faculty requires from them almost from the beginning. Starting from a notional or any other language syllabus inevitably chops up the ongoing science (because different operations involve different notions, functions or structures, and so have to be treated at a remove from each other, although they may need to co-occur in an oral or written piece produced by a student.)

But this *is* a language programme, and many of the staff have a language-teaching rather than a science-teaching experience. Two important questions follow from these points.

One, how can we derive some sort of coherent language practice from science-led materials, focussing our efforts in particular directions at particular times as we need to if students are to practice and not just be exposed to language? And secondly, How does a non-scientist cope in the teaching role when the science content of his lesson is often at the level of the students' own courses?

Consider the writing and speaking skills from the point of view of students' structural appropriateness and control. The students' writing course consists of a series of inputs – it could be a lab experiment, or tabular information on dietary requirements, or an OHP transparency of the heart and circulation, or a videotape on the conservation of momentum, or a series of diagrams on enzyme specificity – and a student-produced output for each – a report of an experiment, a paragraph derived from the tabular information, an answer to an exam-type question on the heart, or a paragraph relating the conservation of momentum demonstrations to the principles studied in last week's physics lecture. Assume that, being science-led, we have no choice in the topic area and it must be the heart in week X (although life is never quite so restrictive). We can still choose between an OHP transparency of the heart, a film on nervous control of heart action and, say, some kind of tabular information. Further, we can, to a limited extent, choose between different outputs from the same input – from a demonstration we may require a report or a set of procedural instructions, for instance.

And these different paths will require different language in some way, and will enable us to focus on different structures. Even from an OHPT of the blood path through the heart, any or all of the following areas repay exploitation:

SUBJECT-VERB CONCORD	The valves allow/the action of the valves allows .....
ACTIVE-PASSIVE	The heart pumps the blood/the blood is pumped .....
LOCATIVE EXPRESSIONS	Along the vena cava/through the valve into the ventricle/from the heart to the lungs/superior/inferior .....
NOMINALISATIONS AND COMPLEX NPs	The contraction of the atrium/the atrium contracts. The passage of the blood/the blood passes... The circulation of the blood/the blood circulates
REDUCED AND UNREDUCED	Blood which contains CO_2/blood containing CO_2.... The ventricle, which is now full of blood, contracts, pumping the blood.....

SUBORDINATE CLAUSES

When the ventricle contracts, the blood is pumped.....

Which and how many of these one chooses is usually determined by the level of the class, but all of these are structures relevant to a piece of simple process description. (It is also worth pointing out that all of these arise non-trivially from the science. One should beware of the attitude that with a bit of ingenuity one can generate any language from a particular input. Consider the scientific irrelevance in this context of 'If the atrium doesn't contract, no blood passes through the valve..'. That sort of thing is a great switch-off for the students.)

In the initial discussion, students get a chance to reinforce their science and their English, and their questions are often real in the sense of asked in order to clear up a point of science or conceptualisation which puzzles them. And the teacher quickly gets an idea of which structures they have a reasonable mastery of, which ones they are struggling with, and which ones the situation cries out for them to use but they are producing what they themselves sometimes feel to be awkward circumlocutions. If a pattern is provided at this point, the students take it up for themselves. And this discussion provides the language bridge between input and output. After their written work has been done, a revision period can provide more opportunity for written or spoken practice. At a low level, this can become almost pure pattern practice on a meaningful input (write or say six sentences about beef as a source of various vitamins.)

The same selection process for structures to be practised can be derived from their reading too.

So one can choose where to put the focus. The teacher's responsibility here is to select inputs and tasks so that practice will be provided in all the areas (s)he considers necessary. Some structures are more difficult to incorporate in this way. The only way I can think of incorporating unreal past conditionals is by asking them what went wrong in the lab.

All this makes coherent language work possible, and has the benefit of flexibility within the framework, so that the same notions, functions and structures can recur – for example students practise past tense forms every time they are given a report to write. One can thus concentrate to some extent on areas of greatest difficulty without making the task monotonously repetitious, and one is not obliged either by a pre-set language syllabus to spend time going through what students can do well enough already, or stretch them beyond their capabilities. Different levels of language complexity are possible for different ability groups, using the same input. Relative clauses may be well within the grasp of good students in a week, but introduction can be delayed or extra practice provided with weaker groups. The practice coheres because the model is presented against an immediately-existing need in the students to communicate, generated by the situation.

How does the non-scientist teacher cope? That is, how does he or she maintain confidence and credibility in front of the students? There is no short cut: the answer is basically by learning enough of the science. We have been lucky in having scientists 'on tap', but also in having language teachers who have worked with great enthusiasm to acquaint themselves with the science, and allow an open-endedness in the classroom. Without this spirit, the enterprise would have collapsed.

There are times when one cannot expect to possess the knowledge to answer student questions, but they are not disappointed if one shows a willingness to help with relevant problems. There are various techniques one can use: 'Bring your book and let's work it out after the lesson.' 'Does anyone else know the answer?' 'Here's the Science Dictionary, look it up.' 'Ask Joe in the next lesson/in the office, he's the scientist.' 'Try the chapter on tissues in your biology book, there's something on it there.' 'That's a good question, but the best person to answer that is your Chemistry lecturer' – since after all we are the English programme, not the Science programme, and should not pretend we can supplant the science courses.

This science-based approach runs through almost all our materials, and appears to be highly motivating. Our problems with it are in refining the materials, broadening them to improve our resources, and educating ourselves in the science, so that we can improve our ability to handle the materials in the classroom.

In conclusion, I should say that I have not tried to account for everything we do on the programme. I have made no mention, for example, of our self-access materials, and the discussion above simplifies the picture in places (eg we would like to develop an intermediate stage to precede the full-blown writing activity). What I set out to do is [illegible]ne very briefly the programme, and discuss in practical terms the approach we h[illegible]taken on the question which has more than any other single issue occupied us on both CSE programmes.

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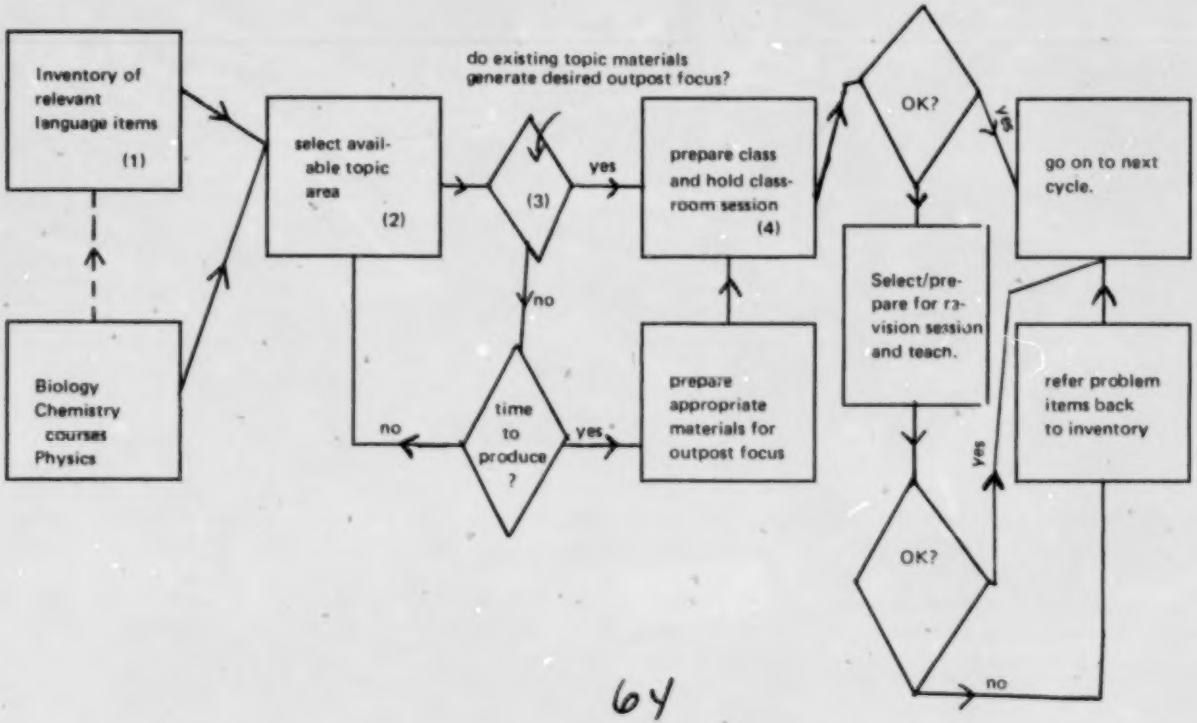
OVERVIEW OF MATERIALS SELECTION PROCEDURE FOR PRODUCTIVE SKILLS



NOTES TO OVERVIEW

1 The inventory consists of language functions and notions and their syntactic and lexical realisations.

2 Criteria for selection of topic area are:

a potential language payoff for students. Will it improve their ability to use a language function where they are helpless or markedly weaker?

b availability of materials

c known or predicted difficulty of a certain area of science for the student

d there is a tendency to select from biology, since this is more language-dependent than physics or chemistry, which make use of formulae

e stage reached in subject curriculum. We usually try to deal with areas more or less concurrently.

3 Selection of mode of presentation (eg text, film, demonstration, transparency, student recall) in conjunction with the desired output will tend to select alternative or overlapping sets of language notions.

The other major criterion for selection of mode of presentation is a desire to give students practice with all relevant language functions and syntactic realisations. Thus each function or set of functions may be selected in term and recycled later.

4 The teacher enters the classroom with a list of notions he wishes to cover, and the likeliest syntactic realisations of these. He can focus discussion in directions which will bring up particular bits of syntax, and can evaluate degrees of success and problem areas while the session is going on and modify accordingly.

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DESIGNING SCIENCE WRITING MATERIALS *

G M Greenall

At the Faculty's request CSE studies were continued as a 4 hour per week programme after the preparatory zero year, now as a fully-accredited first year course alongside their science and engineering studies. The following is an outline of design features and realisation of the materials, entitled 'Science Writing', produced for the first semester of the first year course.

Design Specifications

The course was initally to last one semester (12 weeks), with 4 hours (2 sessions) per week allocated. Class size was to be about 18. Technical writing and report writing was specified as the theme of the course, which was to follow up zero year work as we saw fit. Faculty staff were unwilling at this stage for close integration to take place between Engineering Faculty courses and CSE: understandably, as they were only initiating themselves their first year course, and many of the staff were unsure as to what our role would be in a closely integrated course, especially as regards science content.

Objectives

The main objective was seen in terms of the Faculty's expectations: that the students should write acceptable reports on experiments during laboratory work. Subsidiary/ contributory objectives of furthering and developing reading and oral skills in academic scientific contexts were seen by us as desirable in the light of our more intimate knowledge of student needs and deficiencies. (Faculty staff were about to meet the students for the first time, we had taught them for a whole year.)

* Note: Throughout this paper I use the terms 'zero year' and 'first year' – the terms currently in use on the programme to describe the preparatory year and freshman year respectively. In H J Mountford's paper, the preparatory year is referred to as 'first year' and the freshman year as "second year".

Success Criterion

'Success' here implies both individual student success and success of the materials. If a student achieves the prescribed norm he is successful; if enough students achieve the prescribed norm the materials are successful. To be successful a student had to write an acceptable report, as his final examination, of a prescribed experiment. For practical reasons, the experiment is shown on videofilm rather than done by the student himself. Subsidiary objectives were reflected in so far as understanding and correct interpretation of the experiement are dependant on oral (video sound track) and written (theoretical reading passage) input.

Skills/Knowledge Content

Skills required for experiement report writing were seen as being of three types: a) linguistic code skills, b) information structuring/presentation skills and, c) science observatory/deductive skills. It was not intended to teach the latter for their own sake; they were essential to provide a communciative context for meaningful code practice.

a Linguistic Code Skills: We aimed at acceptable and appropriate manipulation of a tightly specified language item content. This language item content is given in Appendix 2. The list of language items is the outcome of a brief study of science text books used in the Faculty. The basis of our selection of items was: i) Is the item relevant for report writing?, ii) Would a lecturer teaching a group of native speakers, at the same level of scientific sophistication, have to explain the item? (If yes, it was excluded; we thus excluded such words as 'isotope' or 'entropy', which embrace complex scientific concepts.) iii) Is the item simple compared with other items of communicative equivalence? Our final list was exemplificatory rather than exhaustive, as is inevitable in a course which has productive skills as its aim. (On the common principle of providing a model, which the student can modify or reject later as he increases in confidence.)

b *Information Structuring/Presentation Skills*

Clearly relevant were information ordering and linking skills, both in complex sentences and at supra-sentence level, as also handwriting, punctuation and report writing format.

c *Science Skills*

The linguistic emphasis of the course made science informational content servile to skills mentioned under a) and b) above. However, certain science skills, by which science data is normally processed by the scientist (eg, observatory and interpretive skills), were considered to be inextricably bound up with the linguistic skills, if

these are to be taught meaningfully. For instance, in order to be able to use the phrase 'This must have been because ....' appropriately, the student must be in possession of the necessary science interpretive skill. (Compare our attitude to science skills here to that outlined in section 4.2 (Rationale for Science Language Communication Units) of A J Mountford's paper). Furthering science skills, however, was not considered to be part of our role, especially as we were now working alongisde first year science courses. We depended on a developing grasp of science skills initiated elsewhere, but foresaw the strong possibility of having to further these in order to create an appropriate context for meaningful linguistic practice. All science informational content was relevant to the students' ongoing science studies, but was otherwise selected on the basis of its exemplificatory value for our language items in use rather than for its own sake.

Sequencing and Grading

The order in which our language items tend to occur in an experimental report fortunately matches the increase in linguistic complexity of the items. Hence an ordered approach to the various stages of an experimental report did not conflict with the demands of an optimal language grading. Language content was thus sequenced/graded as follows:

Unit 1 The Description of Static Objects (Parts/Wholes Relationships)

Unit 2 The Description of Processes (Events/Processes Relationships)

Unit 3 Scientific Reasoning Based on Experimental Observations

Unit 4 Report Writing

The language content of each unit is listed in appendix 2.

As is consistent with the purely exemplificatory role of science content, each science item is self-contained and not introduced according to any overall ordering/grading system. However, later science items, of necessity more complex in order to match the increased conceptual complexity reflected by the later language items, are graded in a rudimentary fashion within themselves.

Approach

The extremely tight schedule, and the clearly defined productive skills objectives made a holophrasitc approach to nearly all language content the most practicable. By this I mean that, for the most part, each item is introduced as a 'chunk' without grammatical analysis. It was hoped that, at this stage, students would be able to cross-reference items so introduced with their basic grammatical awareness. All

items are introduced only when their need or use in a context are entirely clear.

Rhetoric/information structuring elements are taught by analogy with models. The assumption is made that the cognitive processes associated with rhetoric elements are essentially retrievable from students, but need to be made explicit when matching up with the appropriate linguistic realisation. To this end 'explication de texte' type comparisons are made (ie, largely elicited from students,) between numbered lists of sentences and corresponding paragraphs. Rhetoric/ information structuring elements are practised mainly by transformation exercises.

Strategy/Methodology

A standard EFL tradecraft cycle for introduction of new language material while integrating it with existing skills/knowledge is employed throughout the course. The students are confronted with plain graphic material, without labels or captions. The same diagram is reproduced on an OHP transparency and in their own material. The diagram is interpreted and discussed in class – either individual students or tutors providing the new language items as they become obviously necessary for a complete description. Discussion of the diagram – with repetition by weaker students, group correction etc., continues as long as student interest persists. The language items to be taught are finally listed on the board for students to copy into their notebooks. Language stimulated by graphics – representing both dynamic processes as well as static objects – is therefore a major feature of the course, as it is also in much of the zero year material, in particular the SLC Units, and much thought was given to suitability and design of graphic material. (A useful by-product has been the furthering of students' comprehension of diagrammatic convention.)* The students are then expected to memorize the items (meaning/spelling) for a brief interim test – a clearly specified and limited aim which we find gives the students a sense of security. Interim tests at this stage are usually simple slot-filling activities. The initial introductory phase – consisting of several diagrams of the above type – is followed by a mechanical/transformational phase involving various sentence joining (co-ordination/subordination), sequencing and linking techniques. Much of this mechanical stage can be done by students at home, and self-correcting sheets are provided. Re-design of this section as a fully programmed phase is a development possibility we have in mind. The interim mechanical stage then merges with the final phase, where students are again presented with a series of diagrams, accompanied by a variety of graded exercise types designed to lead gradually to open-ended writing stimulated by diagrammatic material. Again, all themes represented in the diagrams are exhausted orally before preceding to writing.

Footnote: *Purely graphic material has, of course, its limitations when representing protracted processes, and is therefore replaced by videofilm in the latter half of Unit 5.

It was intended that much of the written work should be done individually by students during class time. The opportunity thus afforded for teachers to give individual attention to students pays dividends in terms of student motivation/ morale and general accuracy and presentation.

Testing

As stated above, interim tests were of the simple slot-filling type. Dictation and spelling tests (strangely appreciated by the students) were also very appropriate in the early stages of each unit. Final unit tests were, by policy, all open-ended (linguistically) so as to approach as closely as possible specified terminal behavour.

General Comments Based on Feedback

Nearly all the material has now been taught through once to the First Year students for whom it was intended. We were subject to some delay in starting the programme, and units tended to take longer than envisaged, and so by the end of the semester we had covered only three of them. At this point we released from the course 60 of the total of 180 students as having by that time reached, in our judgement, a sufficient standard so as to be able to make their own progress from then on. We expect to release another 60 shortly on completion of the final test after Unit 4. Some of the basic premises of the materials require comment in the light of our experience. The most crucial and central of these is perhaps our policy of introducing language items for the most part, as 'chunks' of language useful for the writing of scientific reports. We took this course of action, partly to achieve a significant and concrete goal in the very limited time available, and partly on the assumption that students had by this time at their disposal a basic grammatical awareness by means of which they could process the 'chunks' and absorb them into their extent knowledge by inductive reasoning. It is my feeling that the two-thirds of the students whom we judge to have completed the course successfully were able to do this; conversely, it is lack of basic grammatical awareness that has brought about the failure of the other third. Their scripts are still significantly marred with lack of concord, confusion of passive, active and past tense, lack of awareness of the basic mechanics of sentence structure, co-ordination and sub-ordination, omission and inappropriate use of articles, omission of copula etc., frequently to the extent of complete incomprehensibility of parts of the text. A basic and proven grounding in structure and usage would therefore seem without doubt to be a prerequisite for the course. This comment is particularly significant as 'Science Writing', as a matter of Project Policy, has now been introduced into the zero year course, to be taught alongside the SLC Units, thus leaving the first year free for direct servicing courses. The problem, at present inadequately met by two priming units which were in fact designed for a different purpose, is being approached by two foundation course elements at present being developed; a grammar-based foundation writing course, designed to lead in to the present 'Science Writing' course, and a more grammar-orientated rewrite of the Science Language Units.

Another major premise, related to the above, was our policy to limit the language item content to a few exemplificatory phrases, useful for report writing, ignoring a host of variations and alternatives, and offering the students a 'fossilized' version of the language. Again, the time factor and our wish to achieve concrete goals were involved. In addition, our feelings, now endorsed by experience, were that what many students required above all was confidence; a strictly specified model, almost guaranteeing correctness, was what they needed to gain it. They can always depart from the model later with increased confidence. For this reason we would recommend an extensive science reading programme alongside the Science Writing course.

A third major premise of our materials was our policy of using graphic material and videotape as stimulus to language production, rather than the 'real thing', or actual science activities in the classroom. Our policy was once more determined by our wish to achieve a significant and tangible linguistic goal within the limited time available. In order to cover a useful range of language we had to introduce a large number of technical/scientific items. As far as our clearly linguistic aims were concerned, each one is interesting only in so far as it contextualizes language items. The technical/scientific items are in themselves frequently superficial, not able to hold sustained interest. At the same time, we deliberately aimed to uphold interest by frequent change of items rather than by depth study of individual items. For these reasons we felt that it would be inappropriate to have real items/activities, as a matter of policy, in the classroom. This does not preclude the possibility of bringing items and activities into the classroom occasionally, and this is probably very desirable in the case of zero year classes, who are not yet attending thoroughgoing 'science' classes at the Faculty, which in the case of the first year classes helped to offset the purely linguistic emphasis of our course.

A comment is perhaps in place here concerning problems attendant on the science content of the course. Despite our efforts to keep it simple, the science content became on occasion inevitably complex, especially in later units where fairly sophisticated scientific reasoning was involved. We were fortunate enough to have on the First Year course tutors with necessary adaptability and knowledge to cope with the increasing complexity of the science content. To have the science at one's fingertips was all the more essential as the students themselves often lacked confidence and needed guidance in purely scientific matters. It has become all the more clear to us that a basic grounding in science and a command of fundamental science concepts is a prerequisite for worthwhile EST teaching in our kind of situation.

Development

Immediate future development possibilities lie in the elimination of some of the present weaknesses of the course. For instance, it has been pointed out that, whereas the students are given a lot of practice in the formation of reduced relative clauses in Unit 1, it is not made explicit why reduced relative clauses are used in the kind of texts which the students are to produce. The approach to transitivity/intransitivity

in Unit 2 may also need some rethinking. There are also, of course, a host of minor alterations and adjustments, inevitable after a first draft. The major area of development, of course, lies in the adjustment of the materials for use in the zero year. I have already mentioned the need for grammatical priming, and how this is being met. A modified approach to the science skills content of the course will also be necessary: we can no longer depend on these being furthered by ongoing science courses in the Faculty.

APPENDIX 1

Summary of Course

Unit 1: The description of Static Objects

Phase 1: A number of diagrams of assembled scientific apparatus to introduce and practice the language items specified for Unit 1, accompanied by slot-filling exercises. Some structures/objects of general technical interest are also included, as the lexis is also relevant outside a strict report writing context.

Phase 2: Tranformation exercises involving relativisation and reduced relativisation, a pronounced feature of this kind of writing.

Phase 3: Descriptions of further pieces of assembled apparatus involving language items taught and relativisation. Extensive oral work on items to be followed up by linguistically open-ended captions to the diagrams.

In this phase there is also included a series of complex diagrams taken straight from a science text-book, together with captions or text extracts describing the content of the diagrams. All the textual material involves language items dealt with in Unit 1. Diagrams and accompanying text, are, however, presented in random order and students are to match diagram with text. As well as showing the student that the items are in fact frequently used in genuine scientific text, the exercise activates the students' receptive grasp of the items in a very demanding context.

The unit is concluded by a test involving the writing of an open-ended description of assembled apparatus.

Unit 2: The Description of Processes

Phase 1: A series of diagrams representing processes, both in a laboratory complex and involving technical plant. As is the case in Unit 1, they are designed to introduce and practise the language items specified. Slot-filling

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exercises are again employed. An attempt to rationalise the extremely complex transitivity/intransitivity problems involved in the description of processes is included in this phase. Verbs are divided into three types on a semantic basis, which seemed the most economical way of dealing with the problem. The attempt is perhaps in its present form not entirely satisfactory, but I believe that some sort of head-on approach to the transitivity problem is inevitable.

Phase 2: Transformation exercises involving passivisation, the prepositional phrase 'by means of', 'by - - -ing', 'after - - -ing', relative 'where'.

Phase 3: A series of exercises involving sequencing and joining sentences into paragraphs, eventually leading to open-ended descriptions of processes represented in diagrams.

Unit 3: (called Unit 4 in present draft); *Scientific Reasoning Based on Simple Experiments*

Phase 1:

Revision and Priming: Two items from previous units are taken up, partly for revision purposes and partly to provide a context for introduction of the items specified for this unit. The items are exemplified in text and isolated.

Phase 2: This comprises a series of situations, designed to elicit the language items specified and involving, of course, the appropriate scientific reasoning. A feature of this unit are the theoretical readings, often very short, – which are intended to give the student enough information to make the correct scientific observations and deductions.

Phase 3: A diagram representing an experiment and a theoretical reading, on the basis of which students eventually write a full description of the experiment followed by a statement of observations and conclusions. The test item is an identical task with different subject matter.

Unit 4: (called Unit 5 in present draft) *Report Writing*

Phase 1: All language items introduced in Units 1 – 3 are re-introduced, now in their past form. This phase comprises essentially a number of transformation exercises (present form – past form) and some descriptions in the past form of various experiments represented in diagrams. The use of the past form vis-a-vis the present form is discussed. Some attention is given to distinguishing past forms from past participles in reduced relative clauses.

Phase 2: A model report writing format is presented, and at the same time an attempt is made to make explicit the relevance of the various items taught in units 1 – 3. A full sample report is also given.

Phase 3: A number of simple experiments are shown on video film. Each is accompanied with a theoretical reading, to be read prior to or between showings. On the basis of the videofilm and the theoretical reading the students write reports on the experiments as though they have done the experiments themselves.

APPENDIX 2

Language Item Content

Unit 1: The Description of Static Objects

consist(s) of

is/are connected to

is/are supported by

is/are sealed by

is/are suspended from

is/are fixed to

is/are attached to

pass(es) through

is/are (half-) filled with

contain(s)

is/are coated with

is/are placed (in)

is/are fitted with

is/are inserted (into) (through)

is/are enclosed in

is/are covered by

is/are immersed in

is/are mounted (on)

rest(s) on

is/are inverted

is/are held by

float(s)

is/are made of

Unit 2: The Description of Processes

pass, remove, decrease, heat, ride, boil, drop, place, evaporate, condense, transfer, measure, raise, release, fall, rotate, stir, given off, circulate, convert, drive, generate, accelerate, cool, distill, send, accumulate, move, carry, drift, neutralize, collide, form, apply, reach, break, expand, divide, squeeze, open, close.

Unit 3: Scientific Reasoning Based on Simple Experiments

i ..... must therefore .....

ii This must be because .....

iii The .....er the ..... , the .....er the .....

iv ..... depend(s) on .....

v As ..... , ... (simultaneous events)

vi If ..... , ... will .....

vii Provided that .....

Unit 4: Report Writing

All the above items, in their past form, and also:

To show (that) (how), to find out whether ....., To determine .....

(for 'Aim' of experiment), The equipment was set up as follows:,

The experiment showed that .....

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THE USE OF VIDEO-TAPE RECORDINGS ON THE COMMUNICATION SKILLS IN ENGLISH PROJECT, KAAU

Joseph Cleary

The communication Skills in English Project at King Abdul Aziz University in Jeddah is using video-tape recordings as part of its learning programme with pre-medical and pre-engineering students. The purpose of this paper is to indicate the areas of the programme in which video-tape recordings have been used, and the methods used in conjunction with these recordings.

The students we are concerned with on this Project number about 150 men and women pre-medical students and about 300 pre-engineering and meteorological students in their first year. In addition, about 100 medical and 180 engineering students in their second year study English as a part of their programmes. In the first year the pre-medical students spend about half their time in English classes and the other half in physics, chemistry, biology and other subjects. Their total class time amounts to about 30-35 hours per week. The pre-engineering students, on the other hand, spend most of their time during the first year on English, taking only 3-6 hours per week of mathematics or physics. As a result of this, the aims and procedures of the two sides of the Project vary.

On the medical side, the aims of the first eight weeks of teaching were oriented towards listening, speaking, and note-taking. Reading and writing skills were secondary considerations during that time. The immediate needs of the students centred on ability to listen to spoken lectures, take limited notes, and ask questions about parts of the lectures which they did not fully understand. Following these first eight weeks emphasizing listening and speaking, the programme gradually increased the emphasis on reading and writing until the English work during the second semester for the medical students primarily involved development of reading and writing skills, with a reduced emphasis on the development of speaking and listening skills.

On the engineering side, no such immediate demand for skills related to functioning in lectures existed, as most of the students do not have the 18 hours of lectures and laboratories which the medical students do. Therefore, the balance among the general skills can be more evenly developed. However, the students on the engineering side do not have the opportunity to use the English they learn in an actual science classroom to the extent which the pre-medical students do.
With this framework of student numbers, needs, and study areas various media are used to present science content and language along with appropriate visual information. One medium which was tried to a limited extent last year, but which has been more widely used on various parts of the programme this year is that of television. Although

other media such as books, audio tapes, slides and film have been used successfully, the use of video-tape recordings in classes has been tried in several areas and been found useful as a medium for presenting to the students information which cannot be as easily presented in other ways.

The CSE Project is fortunate in having the facilities for the production, editing, and copying of recordings made on the project. There are fully equipped studio and engineering rooms staffed by two engineers and backed up by audio-visual production staff and cameramen to support film productions. With this staff and these facilities the Project has produced VTR materials using several sources.

First, video-tape recordings have been made of films, film clips, slides and pictures which were considered useful for showing to classes. The ability to produce several recordings of materials adapted from sources outside the Project means that a picture or short film clip from a film is available for viewing and discussion by all classes in small group situations. This also means that a variety of visual input materials is available to all students. For example, it is not possible for science staff on the project to show the operation of a mobile crane to the engineering students. However, using film shots of its operation which have been video-taped, it is possible to talk about the forces existing in the crane's structure while seeing it on television. This source of VTR material enables the language of a particular scientific area to be discussed while providing visual information at the same time, and has proven useful as well as motivational in class work.

A second source of recordings is recordings done by the staff of the project, and the science lecturers in the university. These recordings have fallen into four general categories:

a Recordings of science demonstrations or experiments with equipment which is available to tutors and students in the classroom.

b Recordings of science demonstrations or experiments involving the use of equipment which the tutors and students do not have generally available for use in the classroom.

c Recordings of talks, using a minimum of equipment, but incorporating film clips, slides, pictures, or animation sequences.

d Recordings of lectures given by university science lecturers.

In these areas of production between 15-20 recordings have been made by the staff here. These recordings vary in length from 5 to 45 minutes. They vary in science content from very simple presentations of some sample solids, liquids, and gases to fairly complex discussions on cell structure and reproduction. They vary in language difficulty from very structured pattern practice to complex lectures and film commentaries with no adaptation of the language used.

The topics which have been used have been governed to a large extent by the content of the lectures which the students received in their other subjects. For example, a series of five tapes have been recorded on topics which the engineering students in their second year have studied in physics and chemistry — momentum, forces and moments, electrolysis of solutions, and two others.

The ways in which these recordings are used depends on the assumptions concerning visual aids in general and video recordings in particular. In addition, the aims of particular parts of a programme will determine how any one tape is used in those area. Both the tapes produced by the staff here, and those which are tapes of other materials are obviously used in a variety of ways, and only the main uses can be outlined here. Since the author's experience is generally on the medical side of the project, the assumptions given here mainly reflect this area of the programme.

First, it is assumed that these recordings are visual aids and teaching aids. That is, that they are *aids* in teaching, just as a book, or film is, and that they do not obviate the need for the teacher to understand the content which the language expresses and which is included in the recordings. This means, that the recordings cannot stand by themselves, but depend on the tutor for some explanation and discussion of both the language and the content. Second, it is assumed that a video-tape of an experiment or demonstration is secondary to the actual performance of the demonstration or experiment in the classroom, and that the tutors should consider the actual use of the equipment shown on the tape, as well as just showing the tape. Third, it is assumed that the use of the recordings in the classroom is an active affair, where the role of the student is not totally one of absorption of the language or content, but an activie response to it. And finally, it is assumed that there are many things which are best shown on tape as a way of motivating the students with new content and context for language which the student needs.

These recordings are used in several ways with the medical and engineering classes, depending on the time during the year when they are used, the level of the class which uses them, and the particular objectives which the tutor has. At the lowest level, there are several recordings which are used as reinforcement practice for particula structures taught in the classes. Thus, teachers who want to reinforce the language related to describing the relative size of persons may use a short recording illustrating this. Similarly, in various recordings of experiments, the names of different pieces of apparatus are usually given as reinforcement of these particular terms. Thus, over several programmes, students may hear the terms: bunsen burner, ring stand, clamp beaker, spring balance. These are used several times, each time in a different context.

At a different level of usage, the recordings preser t scientific content, concepts, and the associated language of simple experiments which the students can do in class. For example, the engineering students who have completed a year of English on the programme take a further course in science writing in their second year*. During part

*See G M Greenall's paper, "Designing Science Writing Materials".

of this course, we present several video-tapes of chemistry and physics demonstrations. One of these deals with simple electrolysis of solutions. The presenter demonstrstes electrolysis of a solution of salt water using copper and carbon electrodes. The language used has been practised in previous classes, but the context is different. Thus students can be asked to use language which they have had previously to talk about science in a new situation. In this way both process terms and terms for concrete objects are used in a context which is hopefully understandable to the students, since they can see the processes occurring on the recording. Since the materials used in the demonstration are available to the class tutors, they can do the activity in their classes, asking the students to use the concepts again in a meaningful way.

Another use of video-tape recordings has been in association with science lecturers on the medical side of the project. The introductory lectures in chemistry and biology have been taped and are used in the early part of the English course. These taped lectures are used to introduce the students to the idea of lectures and to give them practice in listening to the lecturers who will teach them during the year. The introductory lectures include a biology talk on the organization of life, from atoms, through molecules, organelles, and cells, up to complicated organisms and ecosystems; and a chemistry talk on the different types of matter – mixtures and pure substances. In use, these programmes are played for the students, discussed with them, and then replayed wholly or in part, with the students actively listening, note-taking in a limited way, and responding to questions on the content and the language used.

Later on during the year, when the medical students have 6-9 hours of lectures per week in science, other recordings which have been made by the staff on the project are used. In part of the writing component of the medical programme, students view a video-tape on a particular topic related to their lectures, such as DNA and Cell-Division, the Periodic Table of the Elements, or the Heart-Lung Machine. The tutor then discusses the science content and any unfamiliar words or concepts with the students, and talks about certain language structures occurring in the programme. Then students are asked to write an explanation of some part of the recording, a report of what they have seen, or several paragraphs which answer a structured set of questions presented by the tutor. In addition, some point in the programme may raise a question, or the presenter may ask a question, which requires the students to consult reference books on the topic of the recording. The point here, as before, is that the students are responding either orally or in writing to meaningful science content, using the language they have either recently acquired or have practised elsewhere.

In general, these are four uses to which the recordings are put. In addition, no mention has been made of recordings which can be used as general background information for the students, or recordings which have been shown to students just because they were thought to be interesting to the students. But this also happens, and some of the better language lessons with medical students during the year have been as a result of showing them recordings with no planned classwork following.

Two potential uses, which have only recently become possible, are the use of recordings made with a portable video-tape recorder in the classroom. The English programme has recently acquired a portable recorder, and several of the tutors have experimented with classroom taping of students as they do different activities. It has been used to tape students as they did a simple experiment, and then talked about it. Playback of the tape, though very novel to the students, enabled them to hear and see themselves, their mistakes, and their ability to communicate to others in a classroom situation. This use is still in the experimental stage, and it remains to be determined how useful this approach can be, as a regular classroom occurrence.

A second potential use is in the taping of university lectures given by the engineering and medical lecturers. Several recordings of engineering lecturers have been made in order to obtain samples of the type and level of lecturers which the students will be required to understand. This is a potentially useful area in that these recordings will provide information of the type of language actually used and of the different levels of scientific content and language complexity which may occur in a lecture.

In summary, then, I have outlined the general situation in which media are used on the Communication Skills in English Project, the types and sources of video-tape recordings which are used, and several of the more general uses to which the recordings are put in the programme. Finally, I have briefly mentioned possible future uses of recordings made using a portable recorder.

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